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N. C. AGRICULTURAL EXTENSION SERVICE

OF THE

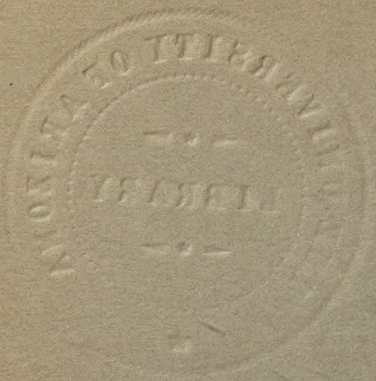
STATE COLLEGE AND
STATE DEPARTMENT OF AGRICULTURE AND
U. S. DEPARTMENT OF AGRICULTURE COOPERATING

B. W. KILGORE, Director
RALEIGH

EIGHTH ANNUAL REPORT

Fiscal Year Ending June 30, 1922. Statistical Report Year Ending December 1, 1922

DISTRIBUTED IN FURTHERANCE OF THE ACTS OF CONGRESS OF MAY 8 AND JUNE 30, 1914



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LETTER OF SUBMITTAL

Raleigh, N. C., January 1, 1923.

North Carolina Agricultural Extension Service
Office of the Director

To His Excellency, Cameron Morrison,
Governor of North Carolina.

Sir:—I have the honor to submit herewith report of the operations of the North Carolina Agricultural Extension Service, conducted jointly by the North Carolina State College of Agriculture and Engineering and the North Carolina State Department of Agriculture, in coöperation with the Federal Department of Agriculture, for the year ended June 30, 1922. This work is under the immediate direction of the "Joint Committee for Agricultural Work" provided for in chapter 68 of the Public Laws of 1913, and the report is made in accordance with the requirements of the act of Congress approved May 8, 1914, and known as the Smith-Lever Act.

Very respectfully,
B. W. Kilgore,
Director.

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BOARD OF TRUSTEES OF THE COLLEGE

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*O. L. Clark—Clarkton	P. S. Boyd—Mooresville
W. R. Bonsal—Hamlet	W. S. Lee—Charlotte
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STAFF OF THE NORTH CAROLINA EXPERIMENT STATION AND EXTENSION SERVICE

ADMINISTRATION

B. W. Kilgore—Director, Experiment Station and Extension Service
C. B. Williams—Vice-Director, Experiment Station
F. E. Miller—Assistant Director, Branch Stations
J. M. Gray—Assistant Director Extension
F. H. Jeter—Agricultural Editor
A. F. Bowen—Bursar
Miss Mary H. McKimmon—Bursar
Miss Mary S. Birdsong—Secretary to the Director
H. C. Evans—Auditor and Executive Assistant

AGRONOMY

C. B. Williams—Chief, Division of Agronomy
W. F. Pate—Soil Agronomist
E. C. Blair—Extension Agronomist
R. Y. Winters—Agronomist in Plant Breeding
P. H. Kime—Assistant in Plant Breeding
S. K. Jackson—Assistant in Plant Breeding
G. M. Garren—Assistant in Plant Breeding
S. W. Hill—Assistant in Plant Breeding
L. G. Willis—Soil Chemist
†W. E. Hearn—Soil Survey
†S. O. Perkins—Soil Survey

CHEMISTRY

W. G. Haywood—Fertilizer Chemist
E. S. Dewar—Assistant Chemist
F. W. Sherwood—Assistant Chemist
B. Naiman—Assistant Chemist
B. C. Williams—Assistant Chemist
Z. B. Bradford—Assistant Chemist
C. L. Williams—Assistant Chemist
L. M. Nixon—Assistant Chemist

ENTOMOLOGY

Franklin Sherman, Chief, Division of Entomology
Z. P. Metcalf—Entomologist
R. W. Leiby—Assistant Entomologist
C. S. Brimley—Assistant Entomologist
T. B. Mitchell—Assistant Entomologist
W. B. Mabee—Extension Entomologist
C. L. Sams—Specialist in Beekeeping

HORTICULTURE

C. D. Matthews, Chief, Division of Horticulture
J. P. Pillsbury—Horticulturist
L. H. Nelson—Assistant Horticulturist
E. D. Bowditch—Assistant Horticulturist
F. E. McCall—Landscape Garden Specialist
R. F. Payne—Extension Horticulturist
C. L. Williams, Research Assistant Horticulturist

ANIMAL INDUSTRY

R. S. Curtis, Acting Chief, Animal Industry Division
Earl Hostetler—Beef Cattle and Swine
F. T. Peden—Beef Cattle and Swine
†George Evans—Sheep Extension
W. W. Shay—Swine Extension
J. M. Watts—Assistant in Swine Extension
B. F. Kaupp—Poultry Pathologist
A. G. Oliver—Poultry Extension
E. G. Wardin—Assistant in Poultry Extension
Stanley Cymbs—Dairy Experimentalist
J. A. Arey—Dairy Farming
†F. R. Farnham—Assistant in Dairy Farming
A. C. Kimrey—Assistant in Dairy Farming
†H. S. Wilson—Assistant in Dairy Farming
J. O. Halverson, Feed Chemist and Specialist in Nutrition

*Members of Joint Committee for Agricultural Work.

PLANT PATHOLOGY

F. A. WOLF—Plant Pathologist
S. J. LEHMAN—Assistant Plant Pathologist
G. A. FANT—Extension Pathologist

DRAINAGE

F. O. BARTEL—Drainage Engineer

MARKETS AND RURAL ORGANIZATION

B. F. BROWN—Chief, Division of Markets
GORRELL SHUMAKER, Marketing Fruits and Vegetables
R. O. MOEN—Credit Unions
J. M. WORKMAN—Warehouse Construction
†P. H. HART—Cotton Grading
J. I. JOHNSON—Assistant in Cotton Grading
†J. P. BROWN, Warehouse Inspection and Operation
V. W. LEWIS—Live Stock Marketing
†FRANK PARKER—Agricultural Statistician
W. M. RHODES, JR., Assistant Agricultural Statistician

BRANCH STATIONS

R. E. CURRIN, JR.—Assistant Director Edgecombe Branch Station
F. T. MEACHAM—Assistant Director, Piedmont Branch Station
S. C. CLAPP—Assistant Director, Mountain Branch Station
CHARLES DEARING—Assistant Director, Coastal Plain Branch Station
E. G. MOSS—Assistant Director, Tobacco Branch Station
J. L. REA, JR.—Assistant Director, Black Land Branch Station

FARM FORESTRY

†H. M. CURRAN—Farm Forestry Specialist

FARM ENGINEERING

E. R. RANEY—Specialist in Farm Engineering

FARM DEMONSTRATION

C. R. HUDSON—State Agent
S. J. KIRBY—Assistant State Agent
E. S. MILLSAPS—District Agent, Piedmont District
C. C. PROFFITT—District Agent, Mountain District
T. D. McLEAN—District Agent, Central District
O. F. McCRARY—District Agent, Northeastern District
E. W. GAITHER—District Agent, Southeastern District

COUNTY AGENTS

Alamance	W. KERR SCOTT	Haw River
Alexander	U. A. MILLER	Taylorsville
Anson	J. W. CAMERON	Polkton
Avery	J. W. GOODMAN, JR.	Newland
Bladen	R. K. CRAVEN	Clarkton
Brunswick	J. E. DODSON	Supply
Buncombe	C. E. MILLER; L. R. HARRILL, Asst.	Asheville
Burke	R. L. SLOAN	Morganton
Cabarrus	R. D. GOODMAN	Concord
Caldwell	D. W. ROBERTS	Lenoir
Carteret	A. H. HARRIS	Beaufort
Caswell	J. L. DOVE	Yanceyville
Catawba	J. W. HENDRICKS	Newton
Cherokee	H. H. ELLIS	Murphy
Chowan	N. K. ROWELL	Edenton
Cleveland	R. E. LAWRENCE	Shelby
Columbus	J. T. LAZAR	Whiteville
Cumberland	COLIN McLAURIN	Fayetteville
Craven	J. G. LAWTON	New Bern
Currituck	J. E. CHANDLER	Currituck
Davie	GEORGE EVANS	Mocksville
Duplin	L. L. McLENDON	Kenansville
Durham	O. H. STANARD	Durham
Edgecombe	ZENO MOORE	Whitakers
Forsyth	R. W. POU	Winston-Salem
Gaston	L. B. ALTMAN	Gastonia
Granville	J. H. BLACKWELL	Oxford
Guilford	E. B. GARRETT	Greensboro
Halifax	C. E. LITTLEJOHN	Scotland Neck
Harnett	H. A. Edge	Lillington
Henderson	S. S. STABLER	Hendersonville
Hertford	H. L. MILLER	Winton
Hoke	T. B. BRANDON	Raeford
Iredell	R. W. GRAEBER	Statesville
Jackson	R. W. GRAY	Sylva
Johnston	N. B. STEVENS	Smithfield
Jones	E. F. FLETCHER	Trenton

Lee	E. O. McMahon	Sanford
Lenoir	C. M. Brickhouse	Kinston
Lincoln	J. G. Morrison	Lincolnton
McDowell	W. L. Smarr	Marion
Macon	John V. Arrendale	Franklin
Mecklenburg	Kope Elias	Charlotte
Montgomery	A. R. Morrow	Troy
Moore	M. W. Wall	Carthage
New Hanover	J. P. Herring	Wilmington
Pamlico	R. W. Galphin	Bayboro
Pasquotank	G. W. Falls	Elizabeth City
Pender	C. M. James	Burgaw
Perquimans	L. W. Anderson	Hertford
Pitt	W. B. Pace	Greenville
Polk	J. R. Sams	Columbus
Randolph	Ewing S. Millsaps	Asheboro
Richmond	W. H. Barton	Rockingham
Robeson	O. O. Dukes	Lumberton
Rowan	W. G. Yeager	Salisbury
Rockingham	F. S. Walker	Reidsville
Rutherford	L. D. Thrash	Rutherfordton
Scotland	S. E. Evans	Laurinburg
Stanly	O. H. Phillips	Albemarle
Swain	Frank Fleming	Bryson City
Transylvania	J. W. Lindley	Brevard
Union	T. J. W. Broom	Monroe
Vance	J. C. Anthony	Henderson
Wake	J. C. Anderson	Raleigh
Washington	R. W. Johnston	Plymouth
Watauga	J. B. Steele	Boone
Wayne	A. K. Robertson	Goldsboro
	J. D. Brandon, Assistant	Mount Olive
Wilkes	A. G. Hendren	Straw
Wilson	B. T. Ferguson	Wilson
Yadkin	D. H. Osborne	Yadkinville

NEGRO AGENTS

L. E. Hall, District Agent — Arcade Building, Raleigh

Local Agents

W. D. Brown, Winton	Hertford County
S. T. Brooks, Lumberton	Robeson County
Oliver Carter, Parmele	Parts of Pitt, Edgecombe, and Martin Counties
J. D. Carlton, Salisbury	Rowan County
J. A. Colson, Ansonville	Anson County
D. D. Dupree, Farmville	Greene County
G. W. Herring, Clinton	Sampson County
J. C. Hubbard, Windsor	Bertie County
J. W. Jeffries, Mebane	Alamance County
R. J. Johnson, Rose Hill	Duplin County
E. C. Lackey, Winston-Salem	Parts of Forsyth, Davie, and Yadkin Counties
C. S. Mitchell, Gatesville	Gates County
J. W. Mitchell, Vineland	Parts of Columbus and Bladen Counties
L. H. Roberts, Raleigh	Wake County
I. D. L. Torrence, Charlotte	Mecklenburg County
H. E. Webb, Greensboro	Guilford County
A. D. Herring, Dunn	Harnett County
L. R. Sanders, Smithfield	Johnston County

Negro Club Work

J. D. Wray, Farm Makers' Club Agent, Asst. in Club Work — A. and T. College, Greensboro

HOME DEMONSTRATION

Mrs. Jane S. McKimmon	State Home Demonstration Agent
Miss Maude E. Wallace	Assistant State Home Demonstration Agent
Mrs. Estelle T. Smith	Eastern District Agent
Mrs. Cornelia C. Morris	Central District Agent
Miss Martha Creighton	Piedmont District Agent
Miss Pauline Smith	Tidewater District Agent

County Agents

County	*Agent*	*Address*
Alamance	Miss Edna Reinhardt	Graham
Anson	Mrs. Rosalind Redfearn	Wadesboro
Beaufort	Miss Myrtie Keller	Washington
Bertie	Miss Addie Sue Harry	Windsor
Bladen	Miss Mary Feimster	Elizabethtown
Brunswick	Mrs. Jennie Baker Cavenaugh	Southport
Buncombe	Mrs. Sarah P. Ellis	Asheville

County	*Agent*	*Address*
Cabarrus	Miss Cathleen Wilson	Concord
Catawba	Mrs. Anna Lea Harris	Newton
Chowan	Miss Eliza B. Knight	Edenton
Cleveland	Mrs. Irma Wallace	Shelby
Columbus	Miss Lillie Lankford	Whiteville
Craven	Miss Alice Carter	New Bern
Cumberland	Miss Elizabeth Gainey	Fayetteville
Davidson	Miss Gertrude Alexander	Lexington
Durham	Miss Anna C. Rowe	Durham
Edgecombe	Miss Dorothy Dean	Tarboro
Forsyth	Miss Alice McQueen	Winston-Salem
Franklin	Miss Addie Bordeaux	Louisburg
Gaston	Miss Nell Pickens	Gastonia
Greene	Miss Lillie Mae Aycock	Snow Hill
Guilford	Miss Addie Houston	Greensboro
Halifax	Miss Bernice Allen	Roanoke Rapids
Harnett	Miss Elizabeth Bridge	Lillington
Hertford	Miss Myrtle Swindell	Winton
Iredell	Miss H. Celeste Henkel	Statesville
Jackson	Miss Mamie Sue Jones	Sylva
Johnston	Miss Minnie L. Garrison	Smithfield
Lee	Miss Gertrude V. Little	Sanford
Mecklenburg	Miss Bertha Proffitt	Charlotte
Moore	Miss Nora Bradford	Carthage
Nash	Mrs. Effie V. Gordon	Nashville
New Hanover	Miss Florence Jeffress	Wilmington
Northampton	Miss Mattie Lee Cooley	Jackson
Onslow	Miss Hattie May Morisey	Jacksonville
Pasquotank	Miss Marcie P. Albertson	Elizabeth City
Pender	Miss Georgia Piland	Burgaw
Perquimans	Miss Helen Gaither	Hertford
Polk	Miss Sarah Maude Padgett	Columbus
Robeson	Miss Flax Andrews	Lumberton
Rockingham	Mrs. Ethel Wells Moore	Reidsville
Rowan	Miss M. Adna Edwards	Salisbury
Rutherford	Miss Eva Logan	Rutherfordton
Sampson	Mrs. W. B. Lamb	Garland
Scotland	Miss Marian Swain	Laurinburg
Transylvania	Miss Lucile Clark	Brevard
Vance	Mrs. Hattie F. Plummer	Middleburg
Wake	Miss Marian Plunkett	Raleigh
Washington	Miss Delano Wilson	Plymouth
Wayne	Miss Janie Roberts	Goldsboro
Wilkes	Miss Jennie Whitaker	North Wilkesboro

NEGRO HOME DEMONSTRATION AGENTS

Anson	Mrs. Cherry Fulton	Wadesboro
Beaufort	Mrs. Sarah Williams	Washington
Columbus	Miss Carrie Spaulding	Clarkton
Johnston	Miss Lucy Wade	Smithfield
Wake	Miss Marguerite Galloway	Raleigh
Wayne	Miss Emma McDougald	Goldsboro

†In coöperation with United States Department of Agriculture.

EIGHTH ANNUAL REPORT

OF THE

North Carolina Agricultural Extension Service

For the Year Ending June 30, 1922

Being the Sixteenth Year of Extension Work in the State

B. W. Kilgore, *Director*
F. H. Jeter, *Editor*

It was late in the afternoon of a winter's day. All through the day men had been coming and going. The office of the county agent had been crowded. Things pertaining to the good of agriculture in that North Carolina county had been discussed, individual farm problems had been worked out, and a number of requests for future action had been filed with the agent. At last, only two farmers remained. The others had gone to attend to other business before returning to their homes. The agent left the room for a few moments.

Mr. Brown turned to Mr. Smith and said: "I tell you, Mr. Smith, I've learned more a sittin' here listenin' for several hours than I have learned in years before."

Mr. Smith replied: "Yes, our county agent is a great help to us. If he wasn't, you wouldn't find this crowd of men in here every office day. He's a live wire and he keeps posted."

The scene changes. On a tenant farm in Eastern Carolina, a bright, rosy-cheeked little girl comes to the front door of a country home. She holds to the side of the house and finally makes her way to the banisters about the porch. She walks with difficulty because it is new to her. Though six years of age, she is just learning to walk. She had subsisted on a diet largely composed of white bacon, grits, cornbread, and coffee. The home demonstration agent persuaded her father to buy a cow and to give her liberal amounts of milk. A baby brother soon joined his sister on the porch, and though he had formerly been very sickly, he was then vigorous and healthy. The home agent passing that way stopped and visited with the mother a few minutes. "You must be giving the children milk now," remarked the agent. "Yes," replied the mother, "and I give you praise for the cow."

These two incidents are not given to praise agricultural extension work in North Carolina. They are simple facts, absolutely true, and set down here to show that even though the work of the extension service covers all the big things in the farm life of the State, it also gets down close to the elemental things of farming and home-making, and is grad-

ually but surely improving conditions found in the farm homes and on the farms. These incidents could be multiplied many times by others of like nature in 67 counties where white farm agents are at work, in 53 counties where organized work with women and girls is being conducted, and in 16 counties where negro local agents are employed.

Therefore, it would hardly be fair to say that the general farm program of the Agricultural Extension Service embraces only a big comprehensive plan taking in all lines of agricultural improvement in North Carolina, because nothing is greater, probably, than the simple thing of helping in these individual cases to make better homes and better farmers of the most obscure and humble home and farm to be found. However, statistics secured from the reports of all the agricultural workers show that the extension service, in addition to doing these little things each day, is also building in a big way to help out in the broad general advancement of agriculture in the State.

At this time the biggest problem affecting the farm life of the State is the cotton boll weevil. During the past year and continuing into 1923 nearly every activity of the field workers and the specialists at headquarters have been devoted to working out and having adopted better farming methods to overcome the effects of this pest. It is felt that any serious destruction of the cotton crop in those sections where the farmers are almost entirely dependent on cotton will be seriously felt all over the State. It will affect, as it has done in other sections, the continued prosperity of business men, professional men, merchants, bankers, and farmers. Therefore, the livestock workers are engaged in work to increase the number and quality of pastures, the feeding of swine, the use of milk cows, increasing the farm flocks of poultry, and the better handling of beef cattle and sheep. The home demonstration workers have proved that the women can help in the farm income by growing, preserving, and marketing the surplus from the garden, orchard, poultry yard, and dairy. The agronomy workers are showing by demonstrations that good seed, better fertilization, and more intelligent rotation and cultivation of crops have done good. The horticultural workers are obtaining excellent results in the promotion of home gardens and orchards and the better handling of these. The insect specialists have conducted campaigns against the boll weevil founded on the results of several demonstrations with farmers last year. The plant disease workers have aided in inspecting fields for disease so that pure, disease-free seed may be used. Finally, the marketing division comes in and by excellent work has demonstrated that farmers can get a bigger share of the dollar paid by the consumer, and thereby increase the money available for the use of the farmer. Nearly the whole of all these activities have been directed towards aiding those farmers in the cotton section to overcome damage by the weevil. The county agents have used the specialists in the field, and have carried the message of better farming directly to the farms and homes in this area.

Statistical Summary

Grouping the activities of the extension workers by means of figures furnishes rather dry and uninteresting reading. However, it is possibly the only way to show accurately many of the things that have been done during the year in serving the North Carolina farmer, his wife and children. For instance, the county men and women agents have found that by organization they could reach a greater number of people with the same message, and in furtherance of that view 860 rural communities have been organized during the year, with a total membership of 39,627 people. There are also a great number of agricultural clubs, not only among the boys and girls, but including their fathers and mothers. The records show that 211,930 people have attended club meetings held under the auspices of these agents. The club enrollment reached the figures of 25,552 people.

Extension work calls for visits to be made to schools, to farmers, and to homes. During the year 111,624 such visits have been made by the workers, and they have traveled 1,500,302 miles by train, automobile, buggy, or on foot. A number of farmers and others have visited the offices of the county agents or have called at the headquarters of the extension service, and there is recorded 63,249 such consultations being held.

The extension workers assisted in the organizing, judging, and holding of 210 fairs. They attended 20,157 meetings, at which 952,178 people were present. In carrying on the work the extension forces have written and distributed 370,433 official and circular letters. They have published 12,034 articles which were given to the local county newspapers, the daily press, or agricultural papers circulating in North Carolina. A total of 313,000 bulletins have been printed by the extension service during the year, and the workers have distributed 457,515 bulletins.

In rendering actual field service, the workers have helped to secure for farmers 227,885 bushels of improved seed for farm crops. They have helped to build 146 potato storage houses. They have rendered assistance in improving or erecting farm buildings either by encouraging the use of these buildings or in furnishing plans and specifications to the extent of 1,233. They have helped to install 297 water systems, 1,710 lighting systems, and 19 telephone systems. With home conveniences, the home agents have been successful in having 4,803 various kinds of such labor-saving devices placed in the farm homes. In helping to improve sanitary conditions by encouraging the placing of screens, the putting in of sewers and sanitary privies, and otherwise improving sanitary conditions around the home, 7,931 such improvements have been made. The records show that 10,446 home grounds have been improved at the suggestion of the county and home demonstration agents.

Out on the farm 196 drainage systems have been installed, of which 2,257 acres have been tiled and 21,215 acres have been ditched. To

EXTENSION WORKERS AT SCHOOL

Home and Farm Agents gather with specialists for a ten-day short course at the State College.

prevent erosion, 2,975 farms have been improved by putting in better systems of terraces, with 26,556 acres being so terraced. In addition to these farms, several miles of ditch and terrace have been laid out by the engineering division.

Most of the cotton classed during the past year by the Division of Markets has been done in coöperation with the Cotton Growers Association. The division reports, however, that 114,638 bales were classed by its workers.

Due to the fact that the extension organization has not had the services of a farm forestry specialist, work with farm woodlots has not been pushed as much as formerly. However, there is recorded that 398 such woodlots have been improved.

In preparing for the better feeding of cattle, 91 silos have been constructed. In helping to improve the fertility of the land and the yield of crops, the statistics show that 22,953 services with fertilizers, manure, and lime were rendered by the farm demonstration agents during the year.

The encouragement of home gardens has been one of the interesting phases of work attemped by the extension service, especially through the home demonstration and horticultural divisions. There has been a record made of 33,057 such home gardens planted or improved during 1922. The women and girls enrolled in home demonstration work have filled a total of 1,747,339 containers. They have cured or preserved 2,055,270 pounds of meat.

Demonstrations with field crops continue to be one of the principal methods of teaching better farming in North Carolina. The records show that about 12,915 farmers have conducted field demonstrations during the year, and that probably a greater number of other farmers have been influenced by these demonstrations and have handled their crops in a similar way, resulting in better yields being secured.

Coöperative buying and selling has been encouraged during the past year as never before. It would not be too much to say that had it not been for the agricultural extension workers the successful promotion and organization of the cotton, tobacco, and peanut marketing associations could never have been accomplished. But in addition to these large associations, coöperative buying and selling has been encouraged among various small groups of farmers to the extent that 901 such organizations were found in the State last year, and these organizations did a business amounting to $1,614,116.80.

In conducting orchard demonstrations, 13,658 orchards were inspected, pruned, sprayed, or had the borers removed. This comprises a total of 1,852,547 trees.

Most of the tick eradication work is being done directly by the specialists of the Veterinary Division coöperating with the inspectors from the Federal Department of Agriculture. However, the records show that

the farm agents of the extension service succeeded in having 9 dipping vats built during the year, and in dipping 2,500 head of cattle.

The workers of the Home Demonstration Division conducted 4,174 demonstrations in the selection and preparation of foods and 11,044 demonstrations in the preservation of foods. With livestock, a total of 6,287 demonstrations with various classes of livestock and poultry were conducted largely by the Animal Industry Division and the farm agents in the organized counties.

Changes in Staff

The changes in staff since the last report include the following:

Resignations—W. W. Magill, assistant horticulturist; Fred R. Yoder, specialist in rural credits; J. M. Dyer, assistant horticulturist; Miss Mamie Sue Jones, Tidewater district agent in home demonstration work; J. E. Ivey, assistant in poultry investigations; A. S. Cline, assistant director, Blackland Branch Station; H. H. B. Mask, assistant State agent in farm demonstration work; R. W. Green, editor.

Appointments—E. D. Bowditch, assistant horticulturist; F. E. McCall, garden specialist; R. F. Payne, extension horticulturist; E. G. Wardin, assistant in poultry extension; G. W. Fant, extension pathologist; J. L. Rea, Jr., assistant director, Blackland Branch Station; H. M. Curran, farm forestry specialist; S. J. Kirby, assistant State agent in

The Commercial National Bank of Raleigh cooperates with County Agent John C. Anderson to distribute better cotton seed.

farm demonstration work; Miss Pauline Smith, Tidewater district agent in home demonstration work; F. H. Jeter, editor; L. G. Willis, soil chemist; and J. M. Watts, assistant in swine extension.

Cooperation with Other Institutions and Agencies

The Agricultural Extension Service, as usual, has endeavored to cooperate with all those other educational institutions, agencies, and organizations in North Carolina that are working for the advancement of educational and agricultural conditions in the State. The North Carolina College for Women, the Negro Agricultural and Technical College, Peace Institute, and the State Department of Education have continued to render cordial support to this work.

Probably in no other state has the press been so kind to the promotion of agricultural work as it has in North Carolina. The papers have lent their columns to the county agents and home agents, and many of them have established either a section in each issue for items about farm work or they have given a whole page, entitled "A Page for Farmers," to convey agricultural information to their readers. The agents and specialists have also been assisted by banks, chambers of commerce, and various civic and commercial organizations in promoting community improvement, agricultural club work, and other phases of rural life.

Assistant Director

The office of the assistant director, having charge of a number of administrative duties, reports that during the year 34 agents were visited and 16 meetings were attended. This office has charge of the coöperative work being done with the fairs of the State and the records show that a total of 210 fairs were so assisted. These include 44 county fairs and 151 community fairs for white people, 4 county fairs and 19 community fairs for negroes, in addition to the State fairs. The home and farm agents organized and acted as judges at a large number of community fairs, while the specialists assisted these agents at the county fairs.

One of the main efforts put forth by this office has had to do with keeping careful records of work done by the specialists in the various counties, and a satisfactory arrangement has been made to prevent confusion and duplication. A permanent system of filing records has also been instituted in the county agents' offices, and excellent results have been secured.

In a general way there has been a more efficient organization perfected for extension work during the year, and it is felt that both the agents and specialists are facing the coming year's work with a much clearer perception of the tasks ahead of them and with a fuller view of the necessary determination to make the work a more lasting influence in the development of the State's agriculture.

Farm Demonstration

The work in farm demonstration has been conducted in 67 counties where white agents were employed, and in 16 counties with local negro agents. Despite the fact that there have been a number of changes in

the personnel of the workers during the year, some excellent results have been secured, and eight new counties have been organized.

With the coming of the boll weevil there has been a tendency to adopt economy measures in several of the counties, but immediately following any efforts to discontinue the work of the county agent, such strong protests have been made to the commissioners that county agent work has invariably been continued. Farm demonstration work in North Carolina is somewhat varied, due to the different agricultural practices in the various parts of the State. For instance, in the mountain district three of the principal projects revolve around the production of standard and standardized money crops, coöperative marketing, and organizational work. In the Piedmont district attention is given to the production of food and feed crops, the production of standard money crops, and coöperative marketing and organization. In the central district the larger projects are soil improvement, the growing of food and feed and money crops, and the encouragement of coöperative marketing. In the northeastern district there is stressed the coöperative buying and home mixing of fertilizers, work in boll weevil control, and the cooperative marketing of farm crops. In the southeastern district plans are made for a better balanced agricultural system, the promotion of land ownership, a large movement for pork production, and the promotion of sweet potato growing, housing, and marketing.

Since extension work is founded on demonstrations, this division shows that 23,165 crop demonstrations were conducted on 7,973 acres during the year. Also, that 18,290 other demonstrations not directly under the supervision of these workers were conducted on 95,716 acres. The agents have devoted considerable attention to orchards. The totals show that 1,777,848 trees have been involved in the various kinds of demonstrations given on home orchards. Considerable effort has also been put forth to improve the livestock industry of the State since North Carolina has such low rank in livestock production. In carrying out this work the agents have brought in 148 registered dairy bulls and 259 registered dairy cows and heifers, in addition to a number of pure-bred beef cattle, sheep, and goats. The workers have given special attention to swine production as shown by the fact that over 300 registered boars and over 1,000 registered sows have been brought into demonstration territory this year. It would not be worth while, however, to simply increase the number of hogs without showing how to feed and grow them profitably. Therefore, 275 hog-feeding demonstrations have been put on in coöperation with the Animal Industry Division and conducted under the supervision of the county agents. In a number of cases special drives have been put on for the growing of home supplies. Banks, chambers of commerce, and business men have all given this movement their full coöperation. As a result of this, in Anson County alone it is stated that there are now over three-fourths of a million dollars more on deposit in the banks than there was a year

ago. Farmers are being taught how to coöperate in making carlot shipments of their surplus produce, as shown by another instance where 28 farmers coöperated and shipped four carlots of hogs and 15 farmers shipped their surplus cream.

In Avery County certified Irish potato seed are being grown for planting in the Coastal Plain section of North Carolina. A potato growers' association has been organized, and last year planted 750 bushels of seed potatoes that had been properly inspected and guaranteed free of disease. In Alamance County a coöperative creamery was organized and 150 farmers induced to begin poultry work with purebred stock. By starting three permanent pastures in Bladen County several years ago, the county agent now has over 100 good pastures as a result. In Brunswick County two permanent pastures, begun as a demonstration, have now been increased to 172. In Caldwell County 42 head of purebred Jersey cows were brought in and a successful coöperative creamery was organized. In Columbus County coöperative carlot shipments of hogs were inaugurated by the agent conducting several successful hog-feeding demonstrations. Cabarrus County has eight successful community clubs, which meet each month with an average attendance of around one hundred. All the cattle in this county have been tested for tuberculosis. Fifty-six meetings were held in Guilford to explain cooperative marketing, and 3,056 farmers attended. The milk campaign in this county was also very successful, since over 1,200 pupils in the schools of the county were reached and 7,000 milk bulletins were distributed. In Moore County the community fair work in which eight community fairs had over 1,000 exhibits in 1921 had grown to 5,000 exhibits in 1922, and three of the community fairs won premiums at the county fair. The pig club of Moore County was also one of the most successful in the State.

In a number of counties the coöperative carlot shipments of hogs was a new feature of extension work that proved most satisfactory to the farmers. Several of the counties are making arrangements to make two shipments annually, one being in March and the other in August. The coöperative purchasing of fertilizer materials has also proved to be a fine demonstration in a number of the counties. For instance, farmers in Onslow County coöperated to buy 1,800 tons of fertilizers and fertilizer materials at a saving of about $15,000. Storage bins for lime have been built in some of the counties, cream routes established, more orchards and gardens planted, and better seed secured. These are among some of the many successful demonstrations handled during the year by the county agents. The list could be continued at length, but these are given to show in a measure how the work is being conducted.

Boys' Agricultural Clubs

Club work with boys this year has been largely done through organized clubs. More than four-fifths of the members were reached and assisted with their demonstrations through 142 organized clubs. Thirty-nine agents reported enrollment of club members, and of this number 28 secured reports of demonstrations completed. Of the members reporting, 542 were in crop clubs and 1,502 in livestock clubs.

A feature of the club work this year was the club encampments held in various counties. A total of 32 counties were reached in this form of short course and recreation. A number of tours to various parts of the State were held by several county agents, and this was found to be a very valuable piece of club work.

The demonstrations at the State Fair by club members from a number of counties proved to be one of the most interesting and valuable features of the fair last year. About 100 boys entered livestock judging contests, judging six classes of livestock, and about 60 club members entered plant and seed identification judging contests.

During the year Mr. H. H. B. Mask, assistant State agent in charge of club work, resigned to take up work with the Coöperative Cotton Growers Association, and Mr. S. J. Kirby, county agent in Johnston County, was appointed in his place.

Work with Negroes

Work with negroes was conducted in 16 counties, with two new agents added during the year. In a general way the work is carried on similar to that done with the white farmers, but with such necessary adaptation as would meet the needs of the negroes. During January and February considerable attention was given to the organization of both adults and children.

During the year the negroes carried on 2,491 crop demonstrations on 9,840 acres. The average yield of corn on these was 39.4 bushels, compared with the State average of 22 bushels per acre. The negro farmers are also being taught to buy coöperatively, and last year they saved over $8,000 by buying 75 cars of fertilizers and 76 cars of lime through organizations perfected by local agents. There are now 148 organizations in the negro demonstration territory.

Considerable attention has been devoted to improving the fertility of the soil, and during the year campaigns for summer legumes and for winter cover crops were conducted, resulting in 2,000 acres planted to summer legumes and 6,000 acres to winter cover crops. There was much spirited rivalry between the negro agents as to which would excell in this work. The negro agent who does the best all-round work during the year is awarded a gold medal; the one having the most cover crops planted, a silver medal. The winner this year induced 100 farmers to

plant 1,067 acres to cover crops. To the agent getting the most summer legumes planted, a bronz medal is awarded, and the winner secured the planting of about 600 acres of these crops.

Good progress was also made during the year in negro club work, which is conducted similarly to that with white boys. The outstanding feature this year was the number of purebred pigs secured for the negro boys.

Home Demonstration

In home demonstration work 53 counties had agents employed last year. The work included programs of nutrition, the preparation and preservation of foods, clothing, household management and furnishing, beautification of the farmstead, poultry work, dairy work, gardening, and recreation. Of course not all of these projects are carried on in any one county, but subjects were selected and programs made for primary, secondary, and advanced work according to plans worked out by the home agents and the county councils.

Last year the home agents organized 544 women's clubs, with a membership of 9,350, and a similar number of girls' clubs with an equal membership. They also organized 172 community clubs, with 7,819 members. Thirty-five counties have county councils to assist the home demonstration agents and 1,967 women are members of these councils. The agents held 9,816 club meetings where there was an attendance of 211,930 people. They held 2,051 other meetings, at which there was a total attendance of 203,130. This makes the grand total of all meetings held amount to 11,167, at which 415,060 people were given instruction. The agents also visited 12,210 homes and 3,821 schools. They conducted eleven county-wide campaigns in the use and value of milk, and 25 campaigns for better bread. The reports of the agents show that excellent results were secured in all of this work.

Especially remarkable were the results secured in the conservation of food by club members during the year. A total of 1,720,905 containers with a value of $371,905 were filled during the year. The value of the cured meat, lard, and by-products reached the total figure of $616,583.70. The total value of all the poultry and poultry products produced by club members reached the value of $444,261. Excellent results were also secured by the 2,323 demonstrators enrolled in home dairy work.

The number of summer gardens encouraged by the home workers amounted to 19,028, with 9,318 fall and winter gardens. No small income was derived by the demonstrators enrolled in this garden work as shown by the fact that fresh vegetables to the amount of $249,345.68 were sold during the year. This garden work was a part of the "live at home" campaign carried on in 47 counties by the home agents. To help in the family income, the agents succeeded in establishing 7 curb markets and 2 stall markets, where surplus products were disposed of to advantage. Selling by parcel post was encouraged to the extent that

club members received a total of $17,395.80 for farm produce thus sold. This was in addition to the large amount of food products sold direct to local merchants.

Thirty-nine counties did work in clothing last year, and over 5,000 demonstrations were made to show the proper kind of clothes and the best styles needed by the individual club members. Home improvement work was done in 9 counties by special campaign, and over 2,000 demonstrators were enrolled in the improvement of home grounds. The home agents assisted at 125 community fairs, 36 county fairs, and the State Fair. Many of them made exhibits in addition to acting as judges.

In carrying on the work of the Home Demonstration Division, the women agents have coöperated with all of the various departments of the college and the Department of Agriculture, as well as the various other State departments which have needed the assistance of the home agents in putting across their programs of work. Four new counties appropriated for the work during the year, and one county discontinued.

Statistics show that the negro home agents had 61 girls' clubs, with a total of 1,904 members enrolled, and with a total enrollment of 5,254 in the various women's community clubs. In general, the negro home demonstration agents acted as assistants to the white agents in carrying on the work in the negro homes.

Much the same kind of work as was conducted by the white agents was done by these negro assistants.

Agronomy

The work of the Division of Agronomy has been speeded up on account of the coming of the boll weevil to North Carolina, followed by the necessity for encouraging farmers to build up the fertility of their soils, to use better seed, to diversify their farming practices, and to abandon the old one-crop system practiced by so many during the past. The promotion of the use of better seed is one of the most important features of the work of this division, and during the year variety and seed selection demonstrations have been conducted with most of the main field crops.

The cotton variety demonstrations were extended to 14 communities in 10 counties. Field selection demonstrations were carried on in 24 communities of 11 counties, and results show that these communities produced approximately 40,000 bushels of improved cotton seed last year. Since this work started in 1914 there has been a total of 105 communities in 36 counties to carry on the work. In only two of these 105 communities has there been a failure to introduce a better strain of cotton. The average increase of the improved strain over the variety generally grown has amounted to about $22.30. As a result of this work, 10,850 bushels of improved cotton seed were introduced this past spring. The cotton breeders with which the Division of Agronomy has coöperated

sold approximately 12,000 bushels of seed in their local communities and shipped over 6,000 bushels outside of the State.

Seed corn improvement was carried on in 28 communities of 19 counties and help was given to six individual well established corn breeders. Small grain work has been done in communities located in 9 counties. Good results have also been secured in the improvement of soybeans, which was done in 34 counties. The results show that 5 banks have held field crop exhibits in their lobbies for the purpose of introducing better seed in their counties. Each of these banks helped to finance the introduction of good seed, and it resulted in one item of 1,395 bushels of pure cotton seed being sold. The work with better seed was done in 55 counties, where 51 field meetings were held and 73 indoor meetings. A total of 18,598 miles were traveled in carrying on this work.

GROWING CORN BY DEMONSTRATION METHODS.
C. C. Speight of Craven County made 75 bushels per acre without fertilizer on this field.

In the extension work with soils and crops, organic matter is being recommended as the one greatest need of the soil. Legumes are considered as the best crops for this purpose and systematic rotation of crops has been encouraged. The division realizes that the diversification of crops goes hand in hand with soil improvement, and this fact has been emphasized during the year.

The use of better fertilizers and more lime has received attention at nearly all meetings and farms visited. Over 300 farmers have been visited in the extension work with field crop and 57 indoor meetings held. The total attendance of all of these meetings was 1,467. Thirty-four demonstrations to show the value of using lime with legumes and

of turning under legumes for soil improvement were conducted last year. Thirty-eight demonstrations in field crops, at which 12 field meetings were held, were also conducted during the year.

In soil fertility work 22 demonstrations were made in coöperation with 12 county agents. About 40 samples of soil were examined and 20 meetings were attended, at which 1,500 people were present. Lectures were given during the year on the fertilization of field crops, the best rotation of crops for the various sections, and the value of legumes for improving the soil. A total of over 8,000 miles were traveled in this work, 550 letters written, and 75 conferences held. The division made a number of exhibits at fairs and supplied judges for the crop exhibits at various other fairs.

Animal Industry

Extension work in animal industry is carried on with dairy cattle, beef cattle, sheep, swine, and poultry.

In dairy extension there is a great demand for assistance in construction, and during the year a large part of this work has been referred to the Farm Engineering Division. However, assistance has been furnished a number of dairymen in building or remodeling their barns. Nine new barns have been built or remodeled for the production of cleaner milk, 14 silos have been constructed, and 8 milk houses. Personal assistance has also been given in erecting three creameries organized during the year.

Another big feature of the dairy extension has to do with the assistance given the 24 coöperative cheese factories of Western North Carolina. Only 13 of these factories operated throughout the year because of the low price received for their cheese. Demonstrations were made in the manufacture of Swiss cheese, and showed that this work can be carried on efficiently, and will enable the factories to pay a higher price for milk.

The office held 47 meetings to present dairy matters, at which 5,503 were in attendance. One hundred and thirty-nine other meetings, at which about 1,400 people were present, were also attended by members of the dairy farming office during the year. Approximately 1,600 personal visits were made by the workers. The office has continued to give assistance in purchasing family cows, especially in Eastern North Carolina, and to encourage the formation of bull associations. About four such associations were formed during the year. In the utilization of milk, the office has coöperated with the Home Demonstration Division to hold three milk campaigns in cities. The increased demand for milk because of these campaigns has gone as high as from 15 to 25 per cent.

Exhibits of dairy products were made at nine fairs and special meetings. Especial attention should be called to the fine dairy cattle exhibited at the State Fair last fall, where 230 head of dairy animals were exhibited. This is the largest exhibit ever made in the history of the fair. Forty-one breeders in North Carolina are now carrying on official

tests of their herds at a cost of about $2,816 to the breeders. This pays the expenses of 18 supervisors, who have charge of the testing work. Creamery manufacture is also progressing in a very satisfactory way, having increased about 35 per cent over the past year.

With beef extension, considerable work has been done in the finishing of beef cattle and in holding sales of beef cattle in various parts of the State. Three sales were held during the year, with good prices resulting to the North Carolina farmers who consigned the animals.

This office gives considerable attention in attending all livestock meetings and in helping to organize livestock associations. It has also put on some demonstrations with the preparation of pastures on cleared land.

With sheep extension, 46 demonstrations were held during the year, at which 493 people attended. Five farm flock demonstrations were started in 1922 for the purpose of showing how a farm flock of sheep should be properly managed. Six culling demonstrations were also held and considerable work done in placing purebred animals on various farms of the State. During the year 36 purebred rams, 24 purebred ewes, and 100 grade ewes have been secured by this office.

The sheep work in the State has received considerable advertising by the large truck which has carried exhibits showing all phases of sheep growing and handling to 17 fairs and meetings. A wool pool held in 15 counties, at which 42,898 pounds of wool was sold at a price of approximately 10 cents above the ordinary price offered by the country buyer, attracted State-wide attention.

A summary of the work of this office shows that about 9,000 miles were traveled in carrying on the work, over 1,200 letters were written, and 130 personal visits made.

In poultry extension the poultry club agent has traveled over 14,700 miles; has written over 1,500 letters; has visited 394 homes and farms; held 704 demonstrations, and attended 942 meetings at which there were present 14,275 people. Of his poultry club members, 425 showed 1,797 birds, on which they won in cash about $1,400. The agent has helped to build 54 new poultry houses and remodeled 17 others. He held 50 conferences; culled out 188 flocks; exhibited 319 dozen eggs for club members; held three judging contests; made 12 educational exhibits, and gave 241 lectures. His report shows that boys and girls have sold over 40,000 purebred eggs for hatching purposes.

It is found that since the advent of the boll weevil in North Carolina poultry work is developing to a remarkable degree, necessitating the employment of an assistant in this work. Mr. E. G. Wardin, who has had former experience in this line of work, was appointed.

No other phase of extension work has attracted as much attention during the past year as the hog-feeding demonstrations arranged by the office of swine extension. Good results have been secured wherever the

county agent has looked over the work carefully and has insisted in the coöperating farmers keeping careful records. Eighteen counties in the State conducted the work last year, and in nearly every case where reports were received, a profit has been returned. This particular part of the work was done in coöperation with the Division of Markets, and a premium of $1 per 100 pounds was received for all hogs fed under the demonstration plan. This amounted to about $150 in the case of a coöperative carlot shipment. The office of swine extension has developed a system of records which enables the specialists to follow each demonstration throughout.

The statistics from this office show that over 15,000 miles have been traveled, 97 feeding demonstrations started, 175 visits made to agents and demonstrators, 2,024 letters written, and 50 meetings attended, at which 9,657 people were present.

The work has continued to grow in popularity, and so many demands have been received for help until an assistant, Mr. J. M. Watts, has been added to this office to help carry on the work.

Entomology

Extension work in entomology has been confined to studies and demonstrations in general economic problems, to demonstrations in the control of the boll weevil, and in promoting beekeeping in the State. With the coming of the boll weevil there has been an increased demand for assistance and information about this insect, necessitating considerable work and correspondence. During February and March of last year a boll weevil campaign was held in 12 counties in the southeastern part of the State. Later in the year two workers were located in this section to make demonstrations in dusting cotton with calcium arsenate to control the weevil. These demonstrations were carried on in five counties. Reports show that 50 dusting machines, using about 56 tons of calcium arsenate, were used by farmers during the year. A total of over 3,700 acres of cotton were dusted, of which 1,600 acres were located in Scotland County. The results of the demonstrations show that for a cost of $4.88 an average net gain of $24.88 was secured by dusting. The results of these demonstrations are being carried to the farmers all over the State in meetings and by means of timely articles to the press.

In general economic entomology, 64 county agents were visited, 60 meetings with an attendance of 3,246 people were held, and over 10,000 miles were traveled by actual record.

In promoting the keeping of bees, 126 meetings and demonstrations were held during the year with an attendance of 2,296 people. Six hundred and two visits were made to apiaries, and over 11,000 miles were traveled in carrying on the work. Some excellent results were secured in about 16 counties where the work received more than average attention. A demonstration in Johnston County showed that when two

colonies of bees were transferred to modern hives, 240 pounds of surplus honey, valued at $60, was made. Five other colonies left in the common box hives produced no surplus honey. In Jones County in a yard of 150 colonies of bees in box hives, one colony was transferred to a modern hive, and although it was too late for best results, this colony made 50 pounds of surplus honey while practically none was received from all the rest of the yard.

Horticulture

Extension work in horticulture has been largely developed around the more thorough pruning and spraying of commercial orchards, the development of more home orchards, the promotion of home gardens, the use of storage houses to secure a better distribution of the sweet potato crop, the improvement of cultural practices with sweet and Irish potatoes, the formation of marketing associations among growers, and attention to the beautification of home grounds. Much time has been devoted to the development of home gardens. The statistical report shows that in this work 179 visits have been paid to various county agents and 309 visits to farmers. One hundred and sixty-four meetings with an attendance of 11,804 people have been held, and approximately 21,000 miles have been traveled in carrying on the work.

The development of apple orchards in Western North Carolina has also been pushed with some success. Pruning and spraying have been the two productive practices ruling the successful apple production of that section, and many demonstrations have been held to give information as to how this is done. The statistical summary shows that 79 visits have been made to agents and fruit growers, that 56 meetings with a total attendance of 1,476 people have been held, and about 2,000 miles have been traveled in carrying on this work.

The development of the peach orchards in the Sandhill section has received attention by the horticultural workers. An educational program was put on at the first Sandhill Fruit Show held at Hamlet, and over 1,000 peach growers were reached during the time of this show. A number of general demonstrations in pruning and spraying the home orchard were held during the year throughout the entire State. A summary of this work shows that 71 visits were made to agents and others, 35 meetings with an attendance of 1,187 people were held, and about 6,000 miles were traveled in carrying on the work.

With the sweet potato industry approximately 250 plans for building sweet potato storage houses were given to those interested. As a result the storage capacity has been increased over 600,000 bushels. Several meetings promoting the better marketing of sweet potatoes have been held, and one school for county agents was conducted at Rocky Mount.

Much interest was secured in the home garden work put on by the Division of Horticulture in coöperation with the home demonstration workers last year. A garden specialist was secured to conduct this work, and three garden bulletins published for general distribution.

During the past four years about 150 demonstration home orchards have been planted under the supervision of the horticultural workers. Considerable attention has also been given to general truck work and a number of meetings have been held to promote the commercial production of truck crops.

Markets and Rural Organization

The State warehouse system handled by the Division of Markets has grown from 32 warehouses, having a capacity of 49,050 bales of cotton, to 78 warehouses, with a total capacity of 212,620 bales. Most of the cotton classed by the division has been done in coöperation with the Coöperative Cotton Marketing Association, and only two offices have been operating outside of Raleigh. The New Bern office classed 2,709 bales and the Fayetteville office 9,348 bales. In coöperation with the cotton association, 74,000 bales were classed by the division, and 5,872 bales were classed for non-members. This makes a total of 114,638 bales classed during the year.

The work in marketing livestock has been unusually successful, especially with the coöperative marketing of hogs. Thirty-three cars of swine, fed under the direction of the office of swine extension, were sold last year by this office. Most of the work was done in the cotton-growing sections of the State.

A wool pool, at which 301 farmers consigned 43,789 pounds of wool and received an average price of about 31 cents per pound, was another successful undertaking for the year. Jackson County was assisted in a separate pool, at which 20,000 pounds of wool was sold for 36 cents per pound, being five to eight cents more per pound than the farmers were offered at the time of the sale.

Four hundred thousand pounds of cheese manufactured annually by the factories in western North Carolina has not been successfully marketed by these factories, causing a number of coöperating farmers to become disgruntled at prices received for their milk. However, connections were made with a number of reliable brokerage firms to handle the cheese, and the resulting price of milk was considerably increased.

The farm fencing campaign put on by the division has done much to encourage the planting of pastures, and will result in some livestock being kept where these pastures have been put in.

The greatest activity with fruits and vegetables has been done with sweet potatoes. About a dozen local sweet potato growers' associations have been formed and then welded into a State federation, which had about 70,000 bushels of potatoes last year. All the legal forms used by this organization were prepared by the division. The division has also helped in installing curb and stall markets for farm women.

The crop reporting service of the division is now recognized as one of the best in the South, and efforts are being made to give out useful

information about North Carolina crops and crop conditions. The agricultural statistician reports that he has received nearly 5,000 letters and 29,000 reports during the year, and that he has mailed out over 4,000 letters and over 114,000 reports and circulars in addition to the circular letters and pieces of printed matter.

The credit unions of the State are beginning to emerge from a period of financial stringency, and are now on the way to a satisfactory condition. Five new unions were formed during the year.

Plant Pathology

Work in this division has been conducted in coöperation with cotton breeders and growers in order to insure a supply of disease-free seed. At the close of the 1921 season a list of all farmers coöperating to keep their seed free from anthracnose was furnished to county agents so that they might have information as to the source of good seed for 1922. Demonstrations in this work were carried on in 15 counties.

Cotton wilt demonstrations were conducted with Dixie Triumph cotton to develop a higher degree of resistance to disease. These demonstrations were carried on in six counties. Good results were also secured in the inspection of seed Irish potatoes among the growers of Avery County. With the formation of a potato growers' association the work in this county has been simplified and is more effective.

The division has given considerable time to answering letters about plant diseases, to the preparation of timely articles, and in holding special meetings where instructions were given on how to recognize and control plant diseases.

Publications

In addition to editing and distributing the publications of the Agricultural Extension Service, the division also has charge of the mimeograph and multigraph service work for the various divisions. During the past year a total of 544,308 letters and circulars were mimeographed for the various divisions. Of this number 297,368 were mailed directly from the division. During the same time considerable money was saved for the extension service by buying blank paper in quantity and multigraphing letterheads for the various divisions. During the past year there were multigraphed 157,000 letterheads for the Farm Demonstration Division, 84,000 for the Home Demonstration Division, and approximately 18,000 for the Animal Industry Division.

During the same period approximately 9,265 articles were submitted to the press of North Carolina. Eighteen extension circulars, with a total issue of 173,500 copies, were edited and printed last year. About 100,000 copies of these circulars and folders were distributed. Three folders, with a total issue of 42,000 copies, were printed and distributed. Twelve issues of *Extension Farm News* were prepared, with a total edition of 27,000 copies, all of which were distributed from this office.

Four issues of *Tar Heel Club News,* comprising 24,500 copies, were edited and distributed, and all of the bulletins of the Agricultural Experiment Station and the State Department of Agriculture were handled by this division.

Farm Drainage

In farm drainage, 44 farms in 22 counties were visited for the purpose of giving assistance and advice in tile drainage. Plans and reports were made covering 1,016 acres on 16 farms. Approximately 17 miles of tile were laid out on 13 farms in 9 counties. About 22,000 feet of open ditch was also staked out and the grades and cuts given for construction. Sixty-one farms in 17 counties were visited and given assistance in locating and constructing terraces. The total length of terraces laid out amounted to approximately 28 miles. It is the high year for the division in tile drainage work. Considerable work was also done in the large drainage districts with one preliminary examination covering an area of 13,000 acres being made.

Farm Engineering

Work in farm engineering is divided into three main projects: first, instructions in putting in water supply, sewage disposal, and electric lights; second, farm building and concrete construction; third, farm machinery and motors.

The division has held 66 practical demonstrations during the year, at which definite plans for some farm engineering problem were worked out. About 600 blue-prints for various farm buildings were sent out on request, together with a bill of material for each plan. Visits were made to 29 county agents, 53 farmers interested in home water supply, 87 interested in farm buildings, 23 in machinery, 9 in water power, 4 in silos, and 2 in dipping vats. Seven meetings, with a total attendance of 627 people, were held during the year. Three hundred and eleven conferences were held, 875 letters written, and about 10,000 miles were traveled in putting on the work.

A survey was made of 200 farms to show the damage done by rats and weevils in stored grain. The average amount of damage for each was about 5 per cent, with estimates in some cases going as high as 25 per cent.

Reports of Divisions

Attention is directed to the following pages, which give the detailed reports from the various divisions of the Agricultural Extension Service and the financial report for the past year.

REPORT OF ASSISTANT DIRECTOR

To the Director:

During the year 34 visits to agents were made, 5 demonstrations visited or given, 16 meetings attended, with attendance of 1,825 people, 2,150 letters written, 475 office consultations held, 2,700 miles traveled by auto, and 12,705 miles by train.

Fairs

Fairs assisted this year were as follows: 2 State (1 white, 1 negro), 44 white county, and 141 white community, and 4 negro county, and 19 negro community fairs, making a total of 210. Home and farm agents organized and judged the community fairs. Specialists and home and farm agents were used in judging county fairs. The location of the various fairs is shown by the accompanying map.

Picric Acid

Following the conclusion of the late war, a large amount of picric acid was turned over to the Bureau of Public Roads, Federal Department of Agriculture, for distribution to farmers for agricultural purposes. The distribution of this material in this State has been through the assistant director's office.

The material was stored in barrels at various points in the United States. To get it in usable form, it cost seven cents a pound. This cost and the freight was the total cost to farmers. The material has been shipped into this State from Sparta, Wisconsin; Edgewood, Maryland, and Fort Wingate, New Mexico.

A total of 190,773 pounds was brought into the State and distributed to 601 farmers at a saving in the equivalent of similar explosives of over $34,000.

There still remains a large quantity of this material at Fort Wingate, New Mexico, but because of the high freight rate the farmers hesitate in ordering.

Office Records and Reports

During the year this office has devoted considerable study to the keeping of records by the extension workers. With the assistance of the State agent, the weekly county agents' report form was changed and shortened, though it still gives the essential details of the activities of the agents.

Heretofore specialists were not required to make reports to the director's office. A weekly report form was prepared and submitted to the heads of the various divisions for their approval. It was approved without change, and since February first the specialists in all divisions

CURRITUCK
CAMDEN
PASQUOTANK
PERQUIMANS
GATES
CHOWAN
DARE
TYRRELL
HYDE
BERTIE
MARTIN
HALIFAX
NASH
WILSON
EDGECOMBE
GREENE
PITT
BEAUFORT
CRAVEN
JONES
ONSLOW
WARREN
FRANKLIN
GRANVILLE
VANCE
WARREN
FRANKLIN
WAKE
JOHNSTON
SAMPSON
DUPLIN
PENDER
BRUNSWICK
BLADEN
COLUMBUS
ORANGE
DURHAM
CHATHAM
LEE
HARNETT
CUMBERLAND
HOKE
ROBESON
PERSON
CASWELL
ALAMANCE
RANDOLPH
MOORE
SCOTLAND
RICHMOND
ANSON
STANLY
MONTGOMERY
STOKES
ROCKINGHAM
GUILFORD
DAVIDSON
SURRY
YADKIN
DAVIE
IREDELL
ROWAN
CABARRUS
MECKLENBURG
UNION
ASHE
ALLEGHANY
WILKES
CATAWBA
LINCOLN
GASTON
WATAUGA
CALDWELL
CLEVELAND
AVERY
BURKE
MITCHELL
MCDOWELL
RUTHERFORD
POLK
YANCEY
MADISON
BUNCOMBE
HENDERSON
TRANSYLVANIA
HAYWOOD
JACKSON
SWAIN
GRAHAM
MACON
CHEROKEE
CLAY

have been making regular weekly reports to their division heads and to the assistant director's office. It is felt that this change has been very beneficial in that it keeps the administrative office in constant touch with the activities of the specialists. Also, it assists the specialists in keeping accurate records of the year's work.

In addition to weekly reports, each extension specialist is now required to submit in advance an itinerary of all travel. This is of assistance in preventing two or more men going to one place at the same time, thereby causing confusion with the county agents. This year practically all work of specialists with county agents has been so arranged that no confusion has occurred because of the arrival of specialists to do work in a county without definite arrangements with the agents for the work.

The monthly time certificate was changed and rules governing its submission to the Auditor made effective. Because of these rules, extension workers have been more prompt and accurate in submitting both weekly and monthly reports.

In making these changes it has been our purpose to only include the essentials in the reports and to so arrange these as to require the minimum time in preparation. In addition to this, the report blanks are so arranged that they fit readily into a system of filing that makes them become a part of the permanent records of this office and the office of the extension worker.

It has ever been difficult to get county agents to keep any record of the details of his work in his office. This is largely due to the trouble of transferring field notes to permanent records. With the assistance of Mr. M. C. Wilson of the States Relations Service, a system was devised whereby the field notes may become a part of the permanent records. There was nothing compulsory about this change in record keeping. Notebooks and record pads were furnished by the administrative office. Follow-up files and other filing appliances were furnished to the workers at their expense or by the county. Forty-one county agents and eight specialists have adopted this system in total, and are now using it. All agents, both farm and home, have adopted the notebook and pads, but are using some other method of converting the field notes into permanent records.

The form for preparing the program of work by county agents for 1923 was completely changed from the one previously used. The new form provides for a comprehensive analysis of the work in the county, and calls for definite coöperation on the part of farmers within the various communities.

At the annual meeting of county agents this form was presented for their approval. It was approved and all agents are using it in preparing their program of work for 1923.

There has been a general tightening up of the extension organization during the past year, and from the attitude of all workers present at our recent conference, we can feel assured that they are going into the next year's work with a clearer vision of the tasks ahead of them and a strong determination to make their work a great influence in the development of agriculture in the State.

Respectfully submitted,

JAMES M. GRAY,
Assistant Director.

REPORT ON FARM DEMONSTRATION WORK

To the Director:

Herewith you will find the annual report for farm demonstration work of the Agricultural Extension Service for the year ending November 30, 1922.

This report gives, first, the combined work of all white and negro agents and work of white agents with negro farmers. Following that is a separate report of work of negro agents. The club work, also, of white and negro agents is first given combined, followed by a separate report of negro club work.

This report covers a fairly accurate record of work done by 67 county agents and 16 local negro agents.

There have been several changes in the personnel of the workers during the year. The assistant State agent, H. H. B. Mask, resigned to take up coöperative marketing work with cotton. His place was filled by the promotion of county agent S. J. Kirby from Johnston County. County agents have resigned or have been transferred from the following counties: Duplin, transfer; Gaston, resignation; Greene, discontinued on account of physical inability; Johnston, transfer; Pender, transfer. These places have all been filled, except that of Greene County. Work has recently been started in the following counties: Ashe, Granville, Halifax, Harnett, McDowell, Pamlico, Randolph, and Watauga.

There is some variation in the work in the several sections of the State on account of different soil types and elevation. Outside of regularly established lines of work, the activities of district agents may be mentioned about as follows: In the Mountain District three of the large projects are the production of standard and standardized money crops, coöperative marketing and organization. The work of growing Irish potatoes for eating stock and for seed stock in the eastern counties has made good progress. The work with orchards, especially with apples, has been given good attention. The growing of special truck crops of lettuce and celery has been promoted. The work with livestock has been mainly breeding up and introducing purebreds.

In coöperative marketing local marketing organizations have been established, which will eventually affiliate with the central organization at Asheville. One of the problems in this district is the production of money crops such as will meet the market demands. The people already largely grow sufficient food and feed crops to supply themselves.

In the Piedmont District attention has been given to the production of food and feed crops, and the production of standard money crops, coöperative marketing, and organization.

In the Central District the larger projects may be mentioned as follows: soil improvement, the growing of food and feed and money crops, coöperation, and coöperative marketing.

In the Northeastern District the district agent has given much attention to coöperative buying of fertilizers and home mixing, boll weevil work, and coöperative marketing of farm crops.

In the Southeastern District, the district agent has been working on a plan for a more balanced agricultural system promoting projects for home ownership of land, bought on easy terms, a large movement for pork production, and the promotion of sweet potato growing, housing, and marketing.

Plans are now being made for the ensuing year's work for the cotton growing territory of the State. These are largely concerned with the growing of cotton under boll weevil conditions. The weevil has not yet covered our cotton growing territory, but the object of the plan is to help farmers where they have already appeared and get others prepared for their coming, which will probably be within one or two years, according to the latitude of the several counties.

Edgecombe County farmers selecting the best cotton for seed purposes.

As usual, the work may be roughly grouped under the heads of crop production, livestock growing, and miscellaneous. The latter includes almost everything connected with the life and activity of the people on the farm, taking in much in the way of conveniences in and around the home.

The more economical growing of crops is promoted mostly through field demonstrations. During the year 23,165 crop demonstrations have been conducted on 70,973 acres. Reports have been procured from 7,930 of these demonstrations. Records show that in addition 18,290 other crop demonstrations not directly under our supervision have been con-

ducted on 95,716 acres by farmers who were interested in promoting better agriculture through such demonstrations.

In the promotion of the growing and testing of improved seed, 851 farmers have tested 3,873 bushels of seed and planted 53,879 acres with these. For next year's planting 6,924 farmers have selected 15,242 bushels of good seed; 10,829 acres have been treated for diseases and insect pests.

Orchard Work

Due attention has been given to the growing and better care of orchards. The records show that demonstrations were conducted with 3,765 home orchards, with a total of 134,106 trees. Demonstration agents have inspected 2,208 orchards, pruned 2,272, sprayed 1,201, and treated 931 for borers. The number of new orchards planted is 526 on 1,863 acres, with 941,966 trees. This involves a total of 58,678 acres and 1,777,848 trees.

Assistance has been given in caring for 255 commercial orchards with the spraying, pruning, and removal of borers, involving 54,812 trees.

Dairy Cattle

During the year dairy work has been promoted in the bringing in of 148 registered bulls, 259 registered cows and heifers, and much assistance given in feeding and caring for them.

Beef Cattle

Less work has been done with beef than with dairy cattle, but there have been brought into demonstration territory 43 registered bulls and 59 registered cows and heifers. Pasture work is one of the important things that has been given due attention in connection with the growing of all kinds of livestock.

Dipping Vats

Some attention has been given to the erection of dipping vats in the work of eradicating ticks and other animal parasites in certain counties. While nine vats have been built through the influence of the work, agents have helped to construct only three this year, but have helped to fill and operate a total of 39 that were formerly built.

Hogs

Considerable attention has been given to the breeding up and better handling and feeding of hogs. During the year 343 registered boars and 1,035 registered sows and gilts have been secured. A total of 275 valuable hog-feeding demonstrations have been put on and supervised. About 3,465 farmers have been induced to start the growing of grazing crops for hogs.

Sheep and Goats

In the western counties sheep growing has been promoted through the bringing in of 50 registered rams and 48 registered ewes.

Some attention has been given to the growing of goats as small meat animals in several of the eastern counties.

Poultry

A great deal of attention has been given to poultry growing over practically the whole State. Poultry demonstrations to the number of 968 have been conducted with a total of 87,944 chickens, ducks, guineas, turkeys, and geese. As a result of this, 5,366 farms have had their poultry management improved. The standardization of one breed or variety of chickens to a community has been successful in 33 communities. Poultry products are collected on 26 cream routes; 778 flocks have been culled, embracing 41,456 chickens, with the elimination of 9,102 birds. Over 4,000 individual farmers have been induced to raise standard breed poultry this year, and 229 modern poultry houses have been constructed.

Livestock Diseases and Pests

Through the influence of county agents 3,098 demonstrations, embracing 63,944 animals treated, have been conducted. Agents have personally conducted 907 demonstrations, with 16,547 animals.

Fertilizers

There is no way of telling just how many farmers have been assisted with their fertilizers, but there are recorded 18,137 so assisted. With fertilizer demonstrations, 743 have been conducted on 4,422 acres, using 5,004 tons. Farmers in 275 communities have bought coöperatively 15,703 tons of fertilizer at a cost of $1,225,199, thereby saving $59,818. A total of 3,058 farmers have been induced to do home mixing of 17,416 tons of fertilizers at an estimated saving of $31,055.

Manure

The work with manure has been very general, consisting mainly of the supplementing of fertilizer formulas by the addition of some form of phosphorous. It is recorded, however, that 3,364 farmers were induced to take better care of their manure.

Silos

The erection of 54 silos in demonstration territory this year indicates that farmers are giving more attention to the feeding of livestock. Of this number 45 are a direct result of the advice of demonstration agents. These silos are splendid demonstrations of the larger and better way to winter animals.

Lime

Probably a majority of our farm lands are in need of lime, either to correct acidity or bring about other desirable chemical changes in the soil. The number of farmers giving attention to this matter is increasing very rapidly. Records show that 1,457 demonstrations have been conducted, with a report on about one-half of them. This involves 7,203 acres of land and 17,721 tons of lime. Agents have made tests for soil acidity on 1,282 farms and have conducted lime demonstrations in 417 communities.

Farm and Farmstead Improvements

The list of accomplishments is very large. A few of them may be named as follows:

Home water systems installed	114
Home lighting systems installed	1,355
Home grounds improved	838
Home sanitary conditions improved	5,218
Telephone systems installed	19
New pastures started	2,308
Total acreage	8,739
Farms terraced	2,914
Total acreage	26,556
Home gardens planted or improved	4,711
Number of meetings held	6,711
Total attendance	463,394
Official letters written	67,813
Circulars mailed	264,526
Bulletins distributed	70,693
Wood lots improved	398
Induced farmers to grow sugar cane or sorghum for syrup	3,325
Farmers beginning to keep bees	644
Number of hives	2,226

The matter of growing improved varieties of crops is fundamental. Not only can such crops be grown so as to be practically free from diseases, but the yield and quality are both improved. The adaptation of varieties to a given locality is being carried on in a number of communities, and the best varieties being adopted in each. During the year 3,629 farmers have been induced to secure and plant 178,830 bushels of improved seed. Not all of such farmers are going into seed improvement as a business, or have seed to sell, but 692 of them have for sale 311,880 bushels.

County Agents Assist Negro Farmers

On account of the demands of work with white people being so great, white county agents do not have much time to devote to negro work; however, in counties where there are no negro agents, attention has been given to negro farmers. Negro farmers understand that the white

agents will render them the best service possible when called on. About 60 negro farmers have been assisted in this way through demonstrations on over 300 acres. The crops demonstrated are of corn, cotton, wheat, clover, oats, rye, and tobacco.

In several instances white farmers have called on negro agents for advice and suggestions. The services rendered have been very satisfactory.

General Cooperation

The work of the farm and the home are inseparably connected. Neither is complete without the other. In the counties where there are both men and women agents, the work has, with three or four exceptions, been conducted coöperatively between the two for such parts of each as are closely related to the other. In addition to their knowledge of strictly home affairs, many of the women agents are well informed on certain features of farm work. They have lent much enthusiasm and interest to the men's work. On the other hand, most of the men agents know more or less of the work in the farm home, and so they have assisted the women agents considerably.

Specialists

The splendid corps of specialists, both extension and otherwise, have been of invaluable service in the work. More and more county agents are calling on them to help put over such projects as the agents themselves are not capable of handling alone. The coöperation of the following is also noted: chambers of commerce, Rotary, Kiwanis, and Civitan clubs, educational institutions, health workers, farmers' clubs, and others.

Miscellaneous

A vast amount and variety of work has been done under this head. These statistics are given in separate form; however, we call attention to the fact that during the year agents have made about 20,000 calls on farmers and have had about the same number of office calls. The number of meetings held in offices of extension workers is 4,420, with attendance at probably 1,000 others. Through these two means more than 478,000 farmers have been reached.

While most of the agents follow the general plans of work in the State, many of them take up special things outside of the regular line of work. Many of these features have been very successful, so we report a few of them as follows:

Various Successful Undertakings

Anson County. The agent in Anson County has made a special drive for the growing of home supplies. The bankers, chamber of commerce, and other business men gave him their full coöperation. The news-

papers had much to say about the campaign, and assisted in it. As a result of this, the bankers say that this year there is over three-quarters of a million dollars more on deposit than a year ago. In addition, several thousand bales of cotton have not yet been sold. Farmers are planning to make improvements on their farms and in their homes as a result of this year's work. On account of there being a surplus of corn in the county and the price being low, the agent is inducing the farmers to feed it to hogs as part ration in a formula provided by our swine specialist. At present there are 28 farmers doing such hog feeding, and who will have four carloads for sale in the next ninety days.

Another valuable feature of the work in the county is that of fifteen farmers shipping their surplus cream. This brings in a weekly income as well as furnishing a market for feed that could not be sold to advantage. Still another feature that adds diversification to the farming program was the procuring of a carload of selected seed sweet potatoes for planting and the building of a 20,000 bushel storage house to take care of them until spring, when the prices will probably be good.

Alexander County. In this county some splendid work has been done in controlling scab and blotch. This work is attracting attention from a number of the surrounding counties, and will be worth a great deal in that section. Some good work has also been done in renovating old orchards.

Avery County. An important part of the work in this mountain county is the growing of certified Irish potato stock to take the place of Maine-grown seed for planting in our Coastal Plain counties. The farmers in the potato growers' association planted 750 bushels that have been properly inspected for diseases. The plants also were sprayed and inspected so they could be guaranteed free of disease. The potatoes grown in high altitudes in the mountains seem to be fully as valuable for planting in the Coastal Plains as potatoes from Maine. Splendid work has also been done in the coöperative marketing of cattle and wool. A tri-county cattle sale was held, in which 270 cattle brought good prices. A wool sale of 600 pounds that brought 36 cents per pound resulted in raising the local price to the same figures.

Alamance County. Some striking features of the work here include the organization of a coöperative creamery that is a good success. As a result of this, cattle breeding has been promoted. Arrangements are now made for tuberculosis testing and register of merit work. A campaign for poultry has resulted in many new poultry houses being built and 150 farmers starting with purebred stock.

Beaufort County. Three important features of the work here are hog production and marketing, permanent pasture work, and a wool sale.

Bladen County. The county agent in this county started with three permanent pastures as demonstrations. This was followed by 25 the next year and over 100 a year after. The starting of 50 farmers with

purebred cotton seed last year has resulted in getting them on nearly every farm this year. A splendid club encampment was held by the two agents at a beautiful lake.

Brunswick County. As an indication of how important demonstrations interest farmers, there were two permanent pastures started in the county, which have resulted in there now being 172.

Caldwell County. The agent in this county has been successful in bringing in 42 head of purebred Jersey cows and the starting of a successful coöperative creamery as part of his year's work.

Craven County. Three important and successful undertakings here have been the construction of sweet potato storage houses, the promotion of boys' and girls' club work, and conducting hog-feeding projects.

Columbus County. In this county seven successful hog-feeding demonstrations have been conducted in different parts of the county. The hogs were marketed coöperatively in lots which sold at good prices. Some of the men who were in the work coöperatively are now growing carlots by themselves. This is one of the things that is helping to take the place of cotton under boll weevil conditions. The banks in the county financed the bringing in of a carload of Poland-China sows, which were sold to farmers at cost for breeding purposes. Another valuable feature here has been the establishment of permanent pastures in every section of the county.

Cabarrus County. Some good organization work has been done in this county. There are eight community clubs which meet regularly once per month. These organizations are very helpful in handling any project that arises locally. The agent attended as many of the meetings as practicable and gave such assistance as he is capable of. It is reported that the attendance ranges from 50 to 175, with an average of about 100 each.

All the cattle in the county have been tested for tuberculosis, a project which was largely financed by the people.

Chowan County. Among the important features of work in this county may be mentioned those of a coöperative wool sale that brought 31 cents per pound, a splendid agricultural club and some good demonstrations with fertilizers.

Durham County. One of the interesting things in this county was the club camp of sixteen boys between the ages of ten and eighteen years. This was known as the Rota-Ki-Y Camp. The members were under discipline, and were given calisthenic exercises every morning. The educational features consisted of plant identification and egg grading and candling. In the mornings educational features were given; in the afternoon recreational features consisted of baseball, swimming, and other games. At night stories were told around the camp fire and songs were sung. Durham County had a splendid club demonstration booth at the State Fair. Exhibits of corn of several varieties showing good

types and poor types, and methods of selection of seed in the field and in the crib were shown.

A germination test of corn, good and poor seed, showed a great variation in the two kinds.

Guilford County. Important features in this county were the cooperative marketing work, in which 56 meetings were held in the county to explain the matter to tobacco growers. Most of the meetings were held in schoolhouses in the various communities of the county. In a number of instances farmers went from one meeting to another in order to learn as much as possible about the work. Altogether there were 3,056 farmers to attend the meetings.

Another valuable project was the starting of a curb market. This was put on through coöperation of the chamber of commerce and the Woman's Club of Greensboro, assisted by the home agent. During the first five days over 100 women visited the market and made purchases, both the buyers and the farmer sellers were well pleased.

A "milk for health" campaign was conducted by the two agents in the county during February. These agents were assisted by the Dairy Extension Department, the chamber of commerce, and the civic organizations in Greensboro and High Point. Over 1,200 pupils were reached in the two schools of the county, and 7,000 milk bulletins were distributed. A census of the schools showed that one-fourth of the pupils did not use milk in any form. An experiment followed this work, in which pupils under weight were given milk. This experiment showed that such pupils improved in their classroom work, in temperament, and in gain of weight.

Lenoir County. A very successful curb market was established at Kinston, the county-seat, at a privately-owned grove, which was ideal for the comfort of both buyers and sellers. At the first sale everything was sold in short order. At the second sale a much larger number of farmers brought products for sale and more housewives went to purchase. The work continued to improve and created a demand for more than one sale during the week. So twice a week sales were held until late in the fall, when conditions were such that two per week were no longer advisable. On the first of September the chamber of commerce took over the management of the market work. This market has furnished a demand for practically all the surplus farm products in the county during the year. Some good club work was done in this county.

Moore County. Three important features of the work here were as follows: A pig club was organized with 36 members, 34 of which were supplied with registered pigs. The Sandhill Fair offered over $500 as premiums for those who exhibited at the fair. A State-wide pig club judging contest with fifteen teams competing was pulled off.

Eight community fairs were held with over 1,000 exhibits last year. This year there were over 5,000 exhibits. Three of the community fairs won premiums at a county fair.

Through the influence of progressive business men, guided by the county agent and specialists, a commercial apple orchard was started in the northern half of the county, where the soil is of the typical Piedmont type. During the winter forty acres will be planted to suitable varieties of trees. Dynamite will be used for making the holes for planting. A number of individual farmers are also starting orchards for home use.

New Hanover County. In this county a very important drainage project has been started through the influence of the county agent with the coöperation of interested business men and farmers. Several thousand acres of land are included in the area to be drained, some of this being the best farm land in the county, but practically worthless on account of being water-logged.

Five successful cucumber graders were operated in the truck work of the county. This work is of value in getting higher prices for products, and has shown the value of using standard packs and proper varieties. A coöperative shipment of a car of 45 hogs was made during August. These hogs, averaging about ten months old, weighed an average of 260 pounds and brought the top of the market price. The hogs were sold at Richmond, bringing a total of $1,300. After deducting all expenses, a total of $700 was left. Arrangements have since been made for two shipments annually, one in March and one in August.

Onslow County. A splendid demonstration has been made in this county of the value of coöperative marketing in the purchase of fertilizers. The organization in 1922 handled about 1,800 tons of fertilizer and fertilizer materials at a saving of $15,000, or about thirty per cent of the purchase price. Arrangements are now being made for the building of two home mixing plants.

Polk County. The big feature of the work in Polk County are the wonderful progress made in soil improvement and the planting of permanent pastures. Also a successful coöperative merchandising association has been perfected.

Rowan County. Outside of the regular line of work, there have been built two lime storage bins and arrangements made for building two more. They are all of one type, in that they are elevated about six feet from the ground so that wagons may be driven alongside of them and filled by gravity with bulk lime. The bins stand on the sidetrack of the railway, the lime being unloaded from the car into them by the use of a bucket elevator belt. All bins have a warehouse for the storing of sacked lime, fertilizers, feed, or any other commodity that the farmers have occasion to handle.

Another good feature has been the growing of better seed wheat. To promote the matter, an active campaign was put on for better seed wheat with good results. Just before harvest time seed was selected in the field for the next year's planting, enough being secured for distribution to farmers who had not selected seed. Over 2,000 bushels of this good seed wheat were exchanged for scrub wheat.

Robeson County. Important phases of work in this county have been the progress made in planting pastures and the growing of more hogs and poultry under more economical conditions. The banks in the county furnished funds for buying lespedeza seed for 150 pastures and let the farmers have it at cost. Without an exception these pastures have been successful. Many other farmers will plant pastures next season. Applications are already being made to the county agent for assistance to be given in planting of 150 new pastures. A coöperative purchase of 1,170 pounds of carpet grass seed has already been made.

In hog growing, 28 feeding demonstrations have been made, with a total of 348 hogs. During March four carloads of hogs are to be shipped, with others to follow later. A number of farmers are constructing self-feeders and farrowing houses. The Robeson County board of agriculture, composed of one member from each of the townships, is actively behind the work. Through the coöperation of the two agents, two poultry associations have been organized. One of these maintains a truck for collecting poultry and eggs twice a week. The products are graded and shipped, or taken to nearby markets. A number of modern poultry houses, ranging in capacity from 50 to 500 hens, have been constructed. Brood houses have been built and incubators have been purchased.

Randolph County. In this county where the work was recently started a county agricultural club has been organized with 75 members, who are leading farmers in the county. One of the objects of the club is to pool farm products and sell coöperatively. A swine growers' club has also begun auspiciously. A dairy cattle club is under process of organization for the promotion of pastures and a general development of the dairy industry.

Pender County. Briefly noted, some important features of the work are the splendid club encampment and the promotion of the planting of pastures, the new agent following well the plans of his predecessor.

Hertford County. Special features in this county have been the demonstrations in swine production, the work with coöperative marketing and the establishment of a splendid county fair.

Pitt County. An interesting project in Pitt County was the organization of an automobile party of 24 members which made a trip through South Carolina and Georgia to study the matter of growing cotton under boll weevil conditions, so that they might be better able to cope with the menace when it arrives. Hog production has been promoted through the building of 27 self-feeders, the proper mixing of feed, the weighing and keeping of records of gains and other things.

Vance County. Splendid work has been done here in soil improvement by campaigns for terracing and ditching, the growing of legumes, deeper ploughing, and the use of lime. County and community organizations have been perfected and are functioning well.

As a result of former work in the planting of home orchards, many farmers have planted them this year. Most of these are for home use, but two commercial orchards have been planted. A successful club encampment was held with 60 boys and girls at a good two-story brick school building in the county.

Jackson County. Two good projects have been put over in Jackson County. Pasture work has been promoted through the planting of 800 acres as demonstration work. Coöperative buying of fertilizers has been found very valuable to farmers, and especially the matter of buying for cash rather than for time prices.

Jones County. In Jones County a splendid live-at-home campaign has been carried out successfully. After getting the amount of supplies shipped into the county and used by farmers, the county agent found that the cotton and tobacco crop receipts combined would not pay for the supplies purchased. Another feature has been the hog-feeding demonstration work. This, too, was put on as a boll weevil measure. Ten farmers are conducting such demonstrations. They have taught the farmers something about producing pork and the best way to handle it so as to get the highest market prices.

Lincoln County. In Lincoln County some splendid work has been done in the building of a 120-ton storage lime bin for the use of farmers so that they can secure lime at any time during the year when it is convenient for them to haul it.

Another valuable project was that of the planting of home orchards, through the coöperative purchase of trees at a considerable saving. This work has stimulated the desire for more and better home orchards.

Johnston County. Although there was a change of agents in this county during the year, yet the two agents managed so well that there was very little break in the work. Some of the valuable features include the building of a 10,000-bushel storage house for sweet potatoes, which is practically filled at this time. A lime campaign resulted in the purchase of twelve cars of lime coöperatively by farmers in several communities working together. The results of the use of lime have been shown to be important; already the farmers are buying it in large quantities. The work with the improvement of several farm crops by seed selection has been very valuable. The first year eight progressive farmers started with the purchase of 125 bushels of one of the best varieties of cotton to be procured. The second year over 3,000 bushels of that variety were planted in the county. The State Prison Farm bought 2,500 bushels for planting purposes. The county agent states that it is impossible to estimate the value of improved types of cotton to the county.

Pasquotank County. Among the several important phases of the work may be mentioned the home garden campaign that resulted in the planting of many new gardens. The coöperative purchase of fertilizers

and the county wool pool have also been valuable. Through a single sale of wool coöperatively the farmers realized $500 more for their wool than they would have received had it been sold separately by individuals.

Rutherford County. In this county seed improvement work, community fairs, and especially fertilizer demonstrations, have proven to be very valuable.

Rockingham County. The agent in this county has done some splendid work among tobacco growers through teaching them the best use of fertilizers and to purchase their fertilizers coöperatively. At a mass meeting of farmers four fertilizer dealers submitted wholesale prices. The dealers were all induced to fix their prices by the lowest bid made. The bankers coöperated by furnishing credit for cash purchases. Over 1,560 tons were purchased through this single undertaking. Splendid work has been done in getting a large number of acres planted to summer and winter legumes. Five successful community fairs were held, which brought the people together in a social way, and also gave them much of educational value.

Richmond County. One valuable phase of work in this county was the planting of 600 acres of velvet beans and 2,000 acres of soybeans during the season. There had never been any soybeans whatever planted in the county before, and but very little of the velvet bean. Over 500 acres of vetch seed were sown in the fall. Thirty-four tons of limestone have been used in the legume work. Three sweet potato curing houses with a capacity of 6,000 bushels have been erected. A splendid county fair was held. A live-at-home campaign has been successfully carried out. Coöperative marketing work has been done.

Scotland County. Briefly stated, the special features of the work in this county are as follows: pecan planting campaign, 6,000 trees planted; peach planting campaign, 40,000 trees planted; dewberry planting campaign, 200,000 planted; home orchard campaign, 24 orchards; home garden campaign, 36 gardens; community fair campaign, 8 community fairs held; spraying and dusting of cotton on several hundred acres.

Transylvania County. Five community fairs have been held in this county, which resulted in bringing together in coöperative work people who had heretofore had different ideas of things and were not working together. A coöperative wool selling organization brought the farmers and the wool manufacturers together, resulting in much better prices for wool. Farmers are now giving much attention to the proper care of the wool through better shearing processes, and to the production of a better grade of wool by using better foundation stock.

Washington County. Much work has been done in this county with the planting of permanent pastures. One hundred and twenty farmers have been induced to plant them during the season. The agent induced them to buy seed coöperatively, gave them information about the preparation and planting of seed, and other things to assist them in the work.

Good work has been done also in the coöperative purchase of fertilizers through an organization for the purpose.

Yadkin County. The agent in this county was very successful in a poultry campaign, and through the organization of 35 local tobacco coöperative associations.

Sampson County. Some splendid work has been done in this county in seed improvement. After some tests to determine the best varieties of cotton, corn, and soybeans, a number of demonstrations were located in various parts of the county to show their value. Much favorable comment has been made upon this work by local papers. Several campaigns have been conducted to extend the work to practically all the farmers in the county. During the past season about 1,200 bushels of highly improved seed were distributed over the county. Valuable work has been done in getting 61 pastures started by bringing into the county 600 pounds of pasture grass seed. Some good hog-feeding demonstrations have been put on to promote more economical production of swine.

Wilkes County. In Wilkes County the program is a continuance of that of previous years, the most important features being the building up of soil fertility through the use of lime and legumes, and the organizing of farmers into corn and wheat clubs for the promotion of these two crops, which are the standard ones of the county.

Wake County. In this county a successful safe-farming program was conducted in the early part of the year, through the coöperation of the county commissioners and chamber of commerce, and practically all parts of the county were reached. Good work has been done through the introduction of improved strains of staple farm crops. The milk routes established last year have increased and a large number of dairy herds have been established to supply the demand for milk. The matter succeeded so well that during the summer there was a surplus of milk. This was soon taken care of by an intensive campaign for the use of more milk in the diet. Good work was done in the assistance given in the coöperative marketing campaign. Five silos have been built during the year. Four successful community fairs, and a county exhibit during the State Fair was promoted.

Wilson County. Probably the most important feature of the work in this county was the assistance given in the control of hog cholera, which was very extensive during the year. Good work has been done in introducing improved types of cotton. Two years ago the agent procured 116 bushels among the best known varieties. This year more than 7,000 acres were planted with the same kind of seed, resulting in an increased production of probably 1,000 bales in the county.

SUMMARIES

White and Negro Agents Combined

COUNTY ORGANIZATIONS

Is there a central county committee supporting your work? Yes, in 30 counties.

Does this committee help you make a county plan of work? Yes, in 19 counties.

How long has this county organization been in existence? 12 years and 2 months.

Number of communities in your county?	1,604
How many community farmers' clubs have you assisted in organizing this year?	489
Total membership	15,798
How many community farmers' clubs have you in your county?	626
Total membership	28,285
How many community farmers' clubs have ceased to exist during the year?	40
How many of these clubs are organized so as to include the farmer's wife, children, and others, in their membership?	172

Are these community farmers' clubs dependent on the county agent for their existence and the continuation of their efforts? 23 are.

Does each club have a community plan or program of work? 14 have.

COOPERATIVE BUYING AND SELLING ORGANIZATIONS

How many of your farmers' organizations buy and sell coöperatively? 892

Have you attempted to keep a bulletin board in your office, listing things for sale and things wanted? 30 agents have.

Have you used the market news service of the U. S. Department of Agriculture or your State market news service? 45 agents have.

	Quantity				Value	Saving
	Cars	Bushels	Pounds	Tons		
Bought	639	188,413	108,953	16,824	$ 765,662.36	$ 244,889.70
Sold	524	29,641	153,320	1,117	777,059.00	278,239.00
Total	1,163	218,054	262,273	17,941	1,542,721.36	523,128.70

CORN

Number of demonstrators	1,587
Number of demonstrators reporting	839
Total acreage of corn grown under improved methods on demonstration farms	8,863
Average yield per acre on demonstrations (bushels)	84
Estimated average yield for entire county (bushels)	39
Increased yield on demonstrations over ordinary methods (bushels)	65
Number of coöperators	3,450
Total acreage of corn grown under improved methods by coöperators	37,146

Average yield per acre on demonstrations by coöperators (bushels)	59
Number of farmers testing seed corn for germination	276
Number of bushels so tested for germination	672
How many farmers planted selected seed?	2,276
Acreage planted with selected seed	17,533
Number of farmers you have influenced to select seed for next year's crop	4,756
Estimated amount of seed selected	15,242
Number who turned under cover crops on their demonstration acres	1,254
Number of acres harvested for silage	1,144
Yield per acre harvested for silage (tons)	12
Number of acres "hogged down"	2,399
Estimated value per acre when utilized this way	$78
Number of acres treated for diseases or insect pests	31
On how many farms have you introduced the growing of corn or improved cultural methods?	5,817
Number of communities in which corn demonstrations were conducted	550

COTTON

Number of demonstrators	1,199
Number of demonstrators reporting	751
Total acreage grown under improved methods on demonstration farms	1,991
Average yield per acre on demonstration farms (pounds seed cotton)	2,538
Estimated average yield for entire county (pounds seed cotton)	1,318
Increased yield per acre on demonstrations over ordinary methods (pounds seed cotton)	1,220
Number of coöperators	2,655
Total acreage grown under improved methods by coöperators	22,193
Average yield per acre by coöperators (pounds seed cotton)	1,602
Number of farmers testing seed cotton for germination	90
Number of bushels so tested	1,257
Number of demonstrators who planted pure or selected seed	1,272
Acreage planted with pure or selected seed	15,644
Number of farmers you have induced to field select seed for next year's crop	1,467
How many turned under cover crops on their demonstration acres?	993
Number of acres treated for diseases or insect pests	4,261
Have you been able to get the farmers in any community to grow but one variety of cotton? 15 agents have.	
On how many farms have you introduced the growing of cotton or improved cultural methods?	6,263
Number of communities in which cotton demonstrations were conducted	1,031

TOBACCO

Number of demonstrators	732
Number of demonstrators reporting	713
Total acreage in demonstrations	3,997
Average yield per acre (pounds)	1,746
Estimated average yield per acre for entire county (pounds)	1,013
Increased yield per acre of demonstrations over ordinary methods (pounds)	733
How many farmers have you induced to plant pure or selected seed?	317
Acreage planted with pure or selected seed	925

How many farmers treated tobacco seed for disease?	372
How many acres did this treated seed plant?	970
On how many farms have you introduced the growing of tobacco or improved cultural methods?	1,633
Number of communities in which tobacco demonstrations were conducted	110

TOMATOES

Number of demonstrators	375
Number of demonstrators reporting	209
Total acreage in demonstrations	64
Average yield per acre (bushels)	314
Estimated average yield per acre for entire county (bushels)	156
Increased yield per acre of demonstrations over ordinary methods (bushels)	158
How many farmers have you induced to plant pure or selected seed?	142
How many farmers have you induced to field select seed for next year's crop	53
Acreage planted with pure or selected seed	17
How many turned under cover crops on their demonstration acres?	74
How many tomato farmers did you influence to adopt a rotation system	9
State the number of acres treated for insect pests	48
Estimate increased value per acre resulting from treatment	$189
State the number of acres treated for diseases	68
Estimate increased value per acre resulting from treatment	$3,452
How many demonstrators grew their own plants?	115
How many farmers have you induced to construct hot beds?	112
On how many farms have you introduced the growing of tomatoes or improved cultural methods?	781
Number of communities in which tomato demonstrations were conducted	30

SMALL GRAINS

(Oats, Wheat, Rye, Barley, Buckwheat)

Oats Demonstration

Number of demonstrators	666
Number of demonstrators reporting	778
Total acreage grown under improved methods on demonstration farms	4,200
Average yield per acre on demonstrations (bushels)	65
Estimated average yield per acre for entire county (bushels)	43
Increased yield per acre on demonstrations over ordinary methods (bushels)	22
Number of coöperators	1,458
Total acreage grown under improved methods by coöperators	8,098
Average yield per acre by coöperators (bushels)	52
Number of farmers testing seed for germination	91
Number of bushels so tested	635
Number of demonstration acres threshed for grain	1,584
Acreage planted with pure or selected seed	3,423
Number of demonstration acres cut for hay	1,622
Average yield of cured hay per acre on demonstrations (tons)	1.7

Increase per acre of cured hay on demonstrations over ordinary methods (tons)	1
Number of acres grazed off	2,514
Estimated value per acre of grazing	$43
Number of acres turned under for soil improvement	2,634
How many bushels of seed were treated for smut?	2,632
On how many farms have you introduced the growing of small grains or improved cultural methods?	4,580
Number of communities in which demonstrations were conducted	250

Wheat Demonstration

Number of demonstrators	406
Number of demonstrators reporting	308
Total acreage grown under improved methods on demonstration farms	2,356
Average yield per acre on demonstrations (bushels)	35
Estimated average yield per acre for entire county (bushels)	21
Increased yield per acre on demonstrations over ordinary methods (bushels)	14
Number of coöperators	2,388
Total acreage grown under improved methods by coöperators	9,695
Average yield per acre by coöperators (bushels)	25
Number of farmers testing seed for germination	202
Number of bushels so tested	990
Number of demonstration acres threshed for grain	2,007
Acreage planted with pure or selected seed	2,080
Number of demonstration acres cut for hay	88
Average yield of cured hay per acre on demonstrations (tons)	2.5
Increase per acre of cured hay on demonstrations over ordinary methods (tons)	2
Number of acres grazed off	29
Estimated value per acre of grazing	$515
How many bushels of seed were treated for smut?	10,132
On how many farms have you introduced the growing of small grains or improved cultural methods?	2,429
Number of communities in which demonstrations were conducted	159

Rye Demonstration

Number of demonstrators	1,039
Number of demonstrators reporting	654
Total acreage grown under improved methods on demonstration farms	5,645
Average yield per acre on demonstrations (bushels)	38
Estimated average yield per acre for entire county (bushels)	23
Increased yield per acre on demonstrations over ordinary methods (bushels)	14
Number of coöperators	2,616
Total acreage grown under improved methods by coöperators	17,228
Average yield per acre by coöperators (bushels)	30
Number of farmers testing seed for germination	168
Number of bushels so tested	303
Number of demonstration acres threshed for grain	562
Acreage planted with pure or selected seed	2,482
Number of demonstration acres cut for hay	180
Average yield of cured hay per acre on demonstrations (tons)	2.2
Increase per acre of cured hay on demonstrations over ordinary methods (tons)	5

Number of acres grazed off	4,739
Estimated value per acre of grazing	$25
Number of acres turned under for soil improvement	14,063
How many bushels of seed were treated for smut?	270
On how many farms have you introduced the growing of small grains or improved cultural methods	2,573
Number of communities in which demonstrations were conducted	313

Barley Demonstration

Number of demonstrators	14
Number of demonstrators reporting	10
Total acreage grown under improved methods on demonstration farms	135
Average yield per acre on demonstrations (bushels)	44
Estimated average yield per acre for entire county (bushels)	30
Increased yield per acre on demonstrations over ordinary methods (bushels)	14
Number of coöperators	10
Total acreage grown under improved methods by coöperators	25
Number of demonstration acres threshed for grain	90
Acreage planted with pure or selected seed	160
Number of demonstration acres cut for hay	20
Average yield of cured hay per acre on demonstrations (tons)	22
Number of acres grazed off	50
Estimated value per acre of grazing	$15
How many bushels of seed were treated for smut?	110
On how many farms have you introduced the growing of small grains or improved cultural methods?	67
Number of communities in which demonstrations were conducted	7

HAY, FORAGE, OR COVER CROPS

Alfalfa Demonstration

Number of demonstrators	408
Number of demonstrators reporting	239
Total acreage in this crop on demonstrations	899
Average yield per acre on demonstrations (tons of cured hay)	7
Estimated average yield per acre for entire county (tons of cured hay)	3
Number of acres cut for hay	723
Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	1
Number of acres grazed off	82
Estimated value per acre of grazing	$18
Number of coöperators	88
Total acreage grown by coöperators	2,195
Average yield per acre by coöperators (tons of cured hay)	2.5
How many acres (if legume) were inoculated?	669
How many farmers ordered inoculating material through you from U. S. Department of Agriculture?	664
How many demonstration acres were turned under for soil improvement?	45
Estimated total number of acres in county turned under by agent's advice	113
How many acres were sown this fall?	755
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	2,005
Number of communities in which demonstrations were conducted	127

Clover Demonstration

Number of demonstrators	1,931
Number of demonstrators reporting	1,274
Total acreage in this crop on demonstrations	11,871
Average yield per acre on demonstrations (tons of cured hay)	23
Estimated average yield per acre for entire county (tons of cured hay)	71
Number of acres cut for hay	4,314
Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	7
Number of acres grazed off	2,955
Estimated value per acre of grazing	$354
Number of coöperators	2,296
Total acreage grown by coöperators	7,703
Average yield per acre by coöperators (tons of cured hay)	12.31
How many acres (if legume) were inoculated?	1,977
How many farmers ordered inoculating material through you from U. S. Department of Agriculture?	680
How many demonstration acres were turned under for soil improvement?	4,994
Estimated total number of acres in county turned under by agent's advice	14,243
How many acres were sown this fall?	27,507
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	5,127
Number of communities in which demonstrations were conducted	507

Vetch Demonstration

Number of demonstrators	74
Number of demonstrators reporting	74
Total acreage in this crop on demonstrations	35
Average yield per acre on demonstrations (tons of cured hay)	2
Estimated average yield per acre for entire county (tons of cured hay)	2
How many acres (if legume) were inoculated?	31
How many farmers ordered inoculating material through you from U. S. Department of Agriculture?	2
How many demonstration acres were turned under for soil improvement?	21
Estimated total number of acres in county turned under by agent's advice	21
How many acres were sown this fall?	552
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	99
Number of communities in which demonstrations were conducted	10

Grasses (Single or Mixed) Demonstration

Number of demonstrators	1,520
Number of demonstrators reporting	602
Total acreage in this crop on demonstrations	5,898
Average yield per acre on demonstrations (tons of cured hay)	29
Estimated average yield per acre for entire county (tons of cured hay)	12
Number of acres cut for hay	1,421
Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	4.4
Number of acres grazed off	2,261

Estimated value per acre of grazing	$342
Number of coöperators	658
Total acreage grown by coöperators	1,599
Average yield per acre by coöperators (tons of cured hay)	7
How many acres (if legume) were inoculated?	2,102
How many farmers ordered inoculating material through you from U. S. Department of Agriculture?	813
How many demonstration acres were turned under for soil improvement	151
Estimate total number of acres in county turned under by agent's advice	972
How many acres were sown this fall?	6,010
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	3,375
Number of communities in which demonstrations were conducted	479

SUMMER LEGUMES

Cowpeas Demonstration

Number of demonstrators	682
Number of demonstrators reporting	473
Total acreage of this crop grown under improved methods on demonstrations	4,803
Average yield per acre on demonstrations (bushels of seed)	24
Average yield per acre on demonstrations (tons cured hay)	4
Estimated average yield per acre for entire county (bushels of seed)	17
Estimated average yield per acre for entire county (tons cured hay)	3
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	87
Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	1.4
Number of coöperators	2,516
Total acreage grown under improved methods by coöperators	14,390
Average yield per acre by coöperators (bushels of seed)	20
Average yield per acre by coöperators (tons cured hay)	3
Acreage planted with pure or selected seed	2,648
Total acreage of demonstrators and coöperators threshed for seed	4,015
Total acreage of demonstrators and coöperators cut for hay	6,648
Number of acres grazed off	819
Estimated value per acre of grazing	$23.63
Total number of acres turned under for soil improvement	13,723
Total number of acres inoculated—by department cultures	112
Total number of acres inoculated—by commercial cultures	5
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	9,543
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	2,489
Number of communities in which demonstrations were conducted	207

Soybeans Demonstration

Number of demonstrators	461
Number of demonstrators reporting	193
Total acreage of this crop grown under improved methods on demonstrations	5,784
Average yield per acre on demonstrations (bushels of seed)	34

Average yield per acre on demonstrations (tons cured hay)	5
Estimated average yield per acre for entire county (bushels of seed)	28
Estimated average yield per acre for entire county (tons cured hay)	4
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	7
Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	0.6
Number of coöperators	359
Total acreage grown under improved methods by coöperators	1,604
Average yield per acre by coöperators (bushels of seed)	23
Average yield per acre by coöperators (tons cured hay)	4
Number of farmers testing seed for germination	9
Total number of bushels seed so tested	16
Acreage planted with pure or selected seed	2,846
Total acreage of demonstrators and coöperators threshed for seed	778
Total acreage of demonstrators and coöperators cut for hay	932
Number of acres grazed off	1,156
Estimated value per acre of grazing	$52
Total number of acres turned under for soil improvement	2,051
Total number of acres inoculated—by department cultures	34
Total number of acres inoculated—by commercial cultures	6
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	3,242
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	1,578
Number of communities in which demonstrations were conducted	182

Velvet Beans Demonstration

Number of demonstrators	633
Number of demonstrators reporting	74
Total acreage of this crop grown under improved methods on demonstrations	11,804
Average yield per acre on demonstrations (bushels of seed)	26
Average yield per acre on demonstrations (tons cured hay)	1
Estimated average yield per acre for entire county (bushels of seed)	15
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	11
Number of coöperators	467
Total acreage grown under improved methods by coöperators	1,798
Average yield per acre by coöperators (bushels of seed)	18
Number of farmers testing seed for germination	15
Acreage planted with pure or selected seed	5,413
Total acreage of demonstrators and coöperators cut for hay	1,000
Number of acres grazed off	2,334
Estimated value per acre of grazing	$34.54
Total number of acres turned under for soil improvement	14,819
Total number of acres inoculated—by department cultures	5
Total number of acres inoculated—by inoculated soil	2
Total number of acres inoculated—by commercial cultures	20
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	14,476
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	1,199
Number of communities in which demonstrations were conducted	157

Peanuts Demonstration

Number of demonstrators	169
Number of demonstrators reporting	99
Total acreage of this crop grown under improved methods on demonstrations	528
Average yield per acre on demonstrations (bushels of seed)	97
Average yield per acre on demonstrations (tons cured hay)	3
Estimated average yield per acre for entire county (bushels of seed)	66
Estimated average yield per acre for entire county (tons cured hay)	3
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	31
Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	1
Number of coöperators	329
Total acreage grown under improved methods by coöperators	441
Average yield per acre by coöperators (bushels of seed)	71
Average yield per acre by coöperators (tons cured hay)	5
Acreage planted with pure or selected seed	357
Total acreage of demonstrators and coöperators threshed for seed	187
Total acreage of demonstrators and coöperators cut for hay	96
Number of acres grazed off	388
Estimated value per acre of grazing	$59
Total number of acres turned under for soil improvement	3
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	806
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	597
Number of communities in which demonstrations were conducted	107

IRISH POTATOES

Number of demonstrators	276
Number of demonstrators reporting	231
Total acreage of potato demonstrations	400.5
Average yield per acre on demonstrations (bushels)	233
Estimated average yield per acre for entire county (bushels)	130
Estimated number of acres planted with treated seed	455
Estimated number of acres on which foliage was treated for diseases and insect pests	1,908
How many farmers used certified seed through your influence?	242
Total acreage planted with certified seed	376
On how many farms have you introduced the growing of Irish potatoes or improved cultural methods?	532
Number of communities in which Irish potato demonstrations were conducted	101

SWEET POTATOES

Number of demonstrators	688
Number of demonstrators reporting	384
Total acreage of potato demonstrations	1,694
Average yield per acre on demonstrations (bushels)	289
Estimated average yield per acre for entire county (bushels)	189
Estimated number of acres planted with treated seed	1,670
Estimated number of acres on which foliage was treated for diseases and insect pests	25

Estimated increased acreage this year over last due to county agent's work	3,696
How many storage houses built this year?	146
Total capacity of these storage houses (bushels)	179,753
How many storage houses in county?	325
Total capacity of storage houses in county (bushels)	515,527
Total number of bushels put in storage this year	359,650
On how many farms have you introduced the growing of sweet potatoes or improved cultural methods?	21,319
Number of communities in which sweet potato demonstrations were conducted	569

ORCHARDS

Number of demonstration home orchards:	
Apple	1,206
Peach	1,823
Other	736
Total number of trees in these demonstrations	3,765

	Orchards	*Acres*	*Trees*
Orchards inspected by agent	2,208	7,608	398,305
Orchards pruned due to your influence	2,272	6,897	240,224
Orchards sprayed due to your influence	1,201	5,278	96,925
Peach orchards treated for borers due to your influence	931	37,031	100,428
Orchards planted due to your influence	526	1,863	941,966
Total	7,138	58,678	1,777,848

How many commercial orchards in your county? Apple, 247 (trees)	1,102,255
How many commercial orchards in your county? Peach, 1,675 (trees)	718,455
How many commercial orchards in your county? Other, 63 (trees)	46,222
How many commercial orchards have you assisted in caring for?	255
How many trees did you actually spray?	6,735
How many trees did you actually prune?	21,117
How many trees did you actually worm?	26,960
Estimated value of increased production due to demonstration methods	$39,509
Report of special campaigns, results, etc.	
Number of communities in which orchard demonstrations were conducted	512

HORSES

How many registered stallions have been secured this year, due to your influence?	1
How many registered jacks secured due to your influence?	7
How many registered brood mares secured due to your influence?	18
How many demonstrations in feeding horses or mules?	4
How many horses or mules in these demonstrations	107
How many horses or mules fed and cared for according to methods you have advocated?	555
How many purebred stallions in county now?	61
How many purebred jacks in county now?	41
Number of communities in which horse demonstrations were conducted	6

DAIRY CATTLE

How many head of registered *bulls* have been secured this year through your influence?	148
How many head of registered *cows* or *heifers* have been secured this year through your influence?	259
How many head of purebred dairy cattle have you assisted your farmers in selling this year—through *individual sales?*	298
How many head of purebred dairy cattle have you assisted your farmers in selling this year—through *group sales?*	959
How many high-grade dairy cows have been secured this year through your influence	423
How many cows have been tested by individuals at your instance to determine the profitable milk producers?	442
Do you carry or own a Babcock tester? 9 agents have.	
How many farmers have been induced to feed a better balanced ration to their stock?	1,219
How many head of stock so fed?	5,293
How many demonstrations in dairy work have you supervised?	109
How many cows in these demonstrations?	356
How many new cream stations established this year due to your influence?	4
How many cream stations in county?	19
How many new cream routes established this year due to the influence of the county agent's work?	24
How many cheese factories in your county?	11
How many cheese factories established in your county this year?	1
How many purebred dairy bulls in the county now?	1,020
How many purebred dairy cows in the county now?	4,130
How many cow-testing associations organized this year due to your influence?	1
Number members in above associations?	3
Number cows tested by above associations?	5
How many dairy breeders' associations established this year due to your influence?	4
How many dairy bull associations established this year?	6
Number of members in these associations	208
Number of bulls in these associations	16
Total number of cows kept by members of these associations	523
Total number of bull associations now in operation in your county	39
Number of communities in which dairy cattle demonstrations were conducted	76

BEEF CATTLE

How many head of registered bulls have been secured this year through your influence?	43
How many head of registered cows or heifers have been secured this year through your influence?	59
How many head of purebred beef cattle have you assisted your farmers in selling this year—through *individual sales?*	90
How many head of purebred beef cattle have you assisted your farmers in selling this year—through *group sales?*	33
How many head of high-grade cows have been secured through your influence?	7

How many beef breeding herds were started this year due to your influence	17
How many head of feeding cattle have been brought into the county this year through your influence?	200
How many beef feeding demonstrations did you supervise?	5
How many cattle in these feeding demonstrations?	126
On how many of these demonstrations were records kept?	1
Estimate the number of beef cattle cared for according to methods which you advocated—where methods were *wholly followed*	95
Estimate the number of beef cattle cared for according to methods which you advocated—where methods were *partially followed*	1,766
Number of purebred beef bulls in county now	382
Number of purebred beef cows in county now?	1,815
Number of communities in which beef cattle demonstrations were conducted	47

DIPPING VATS

How many dipping vats have been built through your influence this year?	9
How many have you helped to construct?	3
How many have you helped to fill with the solution?	39
For how many have you tested the solution?	35
Total number built in county by all forces during the year	10
Total number in the county at this time	258
Estimate the total number of cattle dipped during the year	2,500

HOGS

How many head of registered *boars* have been secured this year due to your influence?	343
How many head of registered *sows* or *gilts* have been secured this year due to your influence?	1,035
How many head of purebred hogs have you assisted your farmers in selling this year—through *individual sales?*	1,488
How many head of purebred hogs have you assisted your farmers in selling this year—through *group sales?*	496
How many herds of purebred hogs have been started through your influence?	394
How many hog-feeding demonstrations did you supervise?	275
How many hogs in these demonstrations?	3,200
On how many of these demonstrations were records kept?	313
How many farmers used self-feeders secured at your suggestion?	187
How many farmers have you induced to start the growing of grazing crops for hogs?	3,465
Estimate number of hogs fed or cared for according to methods which you advocated	20,243
Give number of purebred boars in county now	2,927
Number of communities in which hog demonstrations were conducted	337

SHEEP AND GOATS

How many head of registered *rams* have been secured this year through your influence?	50
How many head of registered *ewes* have been secured this year through your influence?	48
How many head of purebred sheep and goats have you assisted your farmers in selling this year—through *individual sales?*	283
How many head of purebred sheep and goats have you assisted your farmers in selling this year—through *group sales?*	2
How many grade ewes have been brought into the county this year for breeding purposes due to your influence?	150
How many flocks have been started?	38
How many sheep-feeding demonstrations did you supervise?	30
How many sheep in these demonstrations?	557
On how many of these demonstrations were records kept?	7
How many farmers did you induce to grow grazing crops for sheep?	140
Estimated number of sheep fed or cared for according to methods which you advocated	2,744
Number of purebred rams in county now	427
Number of purebred ewes in county now	570
Number of communities in which sheep and goat demonstrations were conducted	41

POULTRY

Number of poultry demonstrations	968
Number of each kind of poultry grown and cared for according to methods which you advocated:	
Chickens	84,530
Ducks	364
Guineas	370
Turkeys	2,315
Geese	365
Total	87,944
On how many farms has poultry management been improved as a result of your work	5,366
How many birds on these farms?	168,737
How many communities have adopted a standard variety of poultry?	33
On how many cream routes are poultry products collected?	26
How many flocks culled through your efforts?	778
Number of birds in flocks culled	41,456
Number of birds eliminated through culling	9,102
How many farmers were induced to raise standard-bred poultry this year?	4,337
How many demonstrators were induced to practice early hatching?	937
How many winter feeding demonstrations?	381
Number of birds in these demonstrations	13,312
Number of new poultry houses erected at your suggestion	229
Number of poultry houses remodeled at your suggestion	343
Number of communities in which poultry demonstrations were conducted	336

LIVESTOCK DISEASES AND PESTS

How many demonstrations have been conducted through your influence in treating or testing livestock for the control of the following?

	Demonstrations	**Animals treated*
Cattle:		
Blackleg	105	1,667
Digestive and other troubles	450	1,057
Tuberculosis	143	3,913
Ticks	136	7,283
Lice	95	556
Hogs:		
Cholera (single treatment)	146	1,971
Cholera (simultaneous treatment)	880	18,117
Digestive and other troubles	94	775
Worms	264	7,213
Lice	502	14,188
Mange	61	6,071
Sheep:		
Stomach worms	25	795
Digestive and other troubles	15	59
Grubs	7	39
Scab	2	41
Ticks	7	46
Horses:		
Digestive ailments	71	81
Distemper	4	7
Accidents	48	69
Other troubles	43	46
Total	3,098	63,994

State in how many of the above demonstrations you actually treated livestock to demonstrate the method of treatment and the number of animals actually treated by you:

	Demonstrations	*Animals*
Cattle, for blackleg	70	982
Cattle, for tuberculosis	63	487
Hogs, for cholera	710	15,004
Horses, for anthrax or charbon	64	74
Total	907	16,547

Have you instruments for such demonstrations? 30 agents have.

*Include all animals treated through your influence.

FERTILIZERS

How many farmers consulted you regarding the use of fertilizers?	18,137
How many fertilizer demonstrations are the farmers conducting with you?	743
Total acreage in these demonstrations	4,422

How much fertilizer used on such demonstrations (tons)?	5,004
How many communities have you influenced to buy fertilizers co-operatively?	275
Quantity bought coöperatively (tons)	15,703
Value of fertilizer bought coöperatively (actual price paid by co-operative purchase)	$1,225,199
Total amount saved by coöperative purchases	$59,818
Number of farmers home-mixing fertilizer on your advice	3,058
Estimated number of tons home-mixed	17,416
Estimated saving to farmers	$31,055
Number of communities in which fertilizer demonstrations were conducted	238

MANURE

How many farmers have you induced to take better care of farm manure?	3,364
How many have provided manure sheds at your suggestion?	552
How many are composting farm manure and waste products?	1,580
How many manure spreaders have been secured this year through your influence?	147
How many farmers are using phosphate or other material for reenforcing farm manure?	1,350
Number of communities in which manure demonstrations were conducted	198

SILOS

How many silos have been constructed in your county this year?		54
How many silos constructed this year as a result of your advice?		45
How many silos are in county now?		571
Of the number of silos in county now there are:		
Tile	37	
Cement	107	
Stave	256	
Stone	12	
Pit	1	
Other	78	
		487
Number of communities in which silo demonstrations were conducted		39

LIME

Number of demonstrators	1,457
Number of demonstrators reporting	673
Total number of acres in lime demonstrations	7,203
How many farms, other than demonstrators, used lime or limestone this year due to your influence?	4,677
Quantity of burned lime or limestone used (tons)	17,721
Total number of acres treated this year	10,630
Number of local sources of lime developed	326
Number of lime crushers installed as a result of your work	3
Number of lime kilns built as a result of your work	200
Number of lime sheds constructed as a result of your work	6
Number of carloads shipped into your county	931
Number of farms on which soil was tested for acidity	1,282
Number of communities in which lime demonstrations were conducted	417

FARM AND FARMSTEAD IMPROVEMENTS

(Things Done with Agent's Assistance and Advice)

	Dwellings	*Other*
Number of buildings erected	138	308
Number of farm buildings improved	312	410
Number of new building plans furnished	55	252
Number of farm buildings painted or whitewashed	395	134

Number of home water systems installed this year	114
Total number of such systems in county now	3,728
Number of home lighting systems installed in county this year	1,355
Total number of such systems in county now	5,576
Number of windmills erected this year	8
Number of home grounds improved	838
Number of farm and home sanitary conditions improved	1,424
Number of homes screened against flies and mosquitoes	2,856
Number of sanitary privies erected	831
Number of sewage disposal systems installed	107
Number of telephone systems installed	19
Number of farmers furnished plans and induced to adopt systematic crop rotations	2,299
Total acreage of such rotations	31,445
Number of new pastures established	2,308
Total acreage of new pastures established	8,739
Number of old pastures renovated	392
Total acreage of old pastures renovated	4,241
Number of drainage systems planned and adopted	167
Number of acres drained—by tile	1,241
Number of acres drained—by ditch	21,215
Number of farmers induced to remove stumps	985
Number of acres from which stumps were removed	5,170
Number of farmers induced to terrace their sloping lands	2,914
Total acreage so terraced	26,556
Number of home gardens planted or improved	4,711
Number of road improving demonstrations assisted in	164
Number of miles of improved roads resulting therefrom	196
Number of farmers who planted cover crops to be turned under	3,484

Number of new implements and tools bought:

Binders	272	Plows	759
Hay presses	180	Hay loaders	32
Gas engines	213	Farm levels	19
Two-horse cultivators	139	Grading machines	1,062
Tractors	148	Hay rakes	18,636
Motor trucks	3,126	Ensilage cutters	1,047
Corn planters	1,364	Cream separators	5,040
Ditching machines	3,611	Spraying machines	169
Mowers	80	Manure spreaders	3,350
Grain drills	436	Small tools	2,934
Disk harrows	733		
One-horse cultivators	2,266	Total	45,616

Number of communities in which farm and farmstead improvements were conducted 975

MISCELLANEOUS EXTENSION WORK

Number of visits by agent to:		
Demonstrators	26,421	
Coöperators	14,408	
Other farmers	21,866	
Business men	5,298	
Boys' and girls' club members	6,109	
		72,769
Number of miles traveled:		
Railroad	490,901	
Team	57,154	
Automobile	511,786	
Otherwise	12,077	
		1,071,918
Calls on agent at office and home relative to work—personal		7,455
Calls on agent at office and home relative to work—telephone		24,282
Number of farmers' meetings held under auspices of agent or Extension Division		4,785
How many meetings of all kinds, including field meetings, did you take part in?		6,711
Total attendance at these meetings (approximate)		463,394
How many field meetings held by you?		8,107
Total attendance at these meetings		33,496
Number of days spent at office work		12,389
How divided:		
Correspondence		2,628
Conference		2,931
Miscellaneous		2,597
Number of days spent in field work?		15,530.75
How divided:		
Supervising regular demonstrations		2,416
Other farm visits		2,581
At meetings		1,172
Assisted in short course work		127
Organization and marketing		1,708
Number of official individual letters written		67,813
Number of articles relating to your work prepared and published		2,485
Number of different circular letters prepared by you and sent out		11,587
Total number of copies of such letters		264,526
Number of bulletins or circulars of U. S. Department of Agriculture distributed		42,244
Number of bulletins or circulars from State College or State Department of Agriculture distributed		70,693
Number of visits to schools relating to work		2,198
In how many schools did you assist in outlining an agricultural course?		135
How many extension schools or short courses did you assist in?		51
Total attendance at these schools		3,572
Total number of days you were engaged in these schools		1,490
Number of farmers who attended short courses at colleges as a result of your effort		74
Number of club boys who entered college for first time this year		74

How many times have you been visited by specialists from college or the department?	1,444
Was there a county fair held in your county?	44
How many demonstrators, coöperators, and club members had exhibits?	3,664
How many of these won prizes?	2,473
How many demonstrations have you in truck or small fruit?	479
How many were successful from a financial standpoint?	257
How many farm account books distributed to farmers?	767
How many farmers in your county did you assist to keep cost production records?	763
How many farmers in your county are practicing fall plowing as a result of county agent's work?	10,590
How many wood lots have been improved at your suggestion?	398
How many farmers in your county have been influenced to grow sugar cane or sorghum for syrup?	3,325
How many farmers began keeping bees this year or improved their methods at your suggestion?	644
Number of hives involved in previous questions	2,226
How many farmers induced to transfer from old to improved hives?	157
Number of hives involved in these transfers	761
How many new queens introduced?	236
How many honey extractors purchased?	30

List in following table work done in connection with seed improvement:

Crop	Improved Seed Secured		Improved Seed Offered for Sale	
	Farms	Bushels	Farms	Bushels
Corn				
Wheat				
Rye				
Cotton		Lbs.		Lbs.
Oats				
Potatoes				
Tobacco		Oz.		Oz.
Other				
Totals	3,629	178,830	692	311,880

SPECIAL REPORT BY WHITE AGENTS ON WORK WITH NEGRO FARMERS

Number of negro demonstrators (all crops)	60
Number of negro demonstrators reporting (all crops)	40
Total acreage of all crops grown under improved methods on negro demonstration farms	328
Number of negro coöperators (all crops)	94
Total acreage of all crops of negro coöperators	1,024
Number of negro farmers who planted pure or selected seed on their demonstrations	57
Number of negro farmers you have influenced to select seed for next year's crop	93
Estimated quantity of all seed selected by negro farmers (bushels)	479

Number of purebred animals bought by negro farmers at your suggestion:	
Dairy cattle	13
Hogs	72
Poultry	99
Number of negro farmers who have produced practically all their home food and feed due to your influence	76
Number of negro agricultural clubs or community organizations formed this year for the general improvement of rural conditions	5
Number of members	82
Farm and rural improvements made due to agent's influence:	
New houses built	1
New barns built	8
New schools built	5
New churches built	3
New toilets built	33
Buildings improved or repaired	33
Total	82
Number of farm-makers' clubs organized this year	2
Number of members in these clubs	23

CLUB WORK

The following report by assistant State agent S. J. Kirby, who has the supervision of the club work, gives in detail the results of that work.

On account of not taking the work until the first of June, and owing to the fact that his predecessor had been engaged in other work for some time previous, the clubs had not been given the very best of attention. By hard work and a determination to recuperate the club work, Mr. Kirby has gotten it to going in good condition again. His interest and enthusiasm have done much to make the work a success.

Herein is submitted a complete statistical report, together with general notes on club work done in North Carolina during the year 1922, as shown by the results given in the annual reports of the county agents. The county agents reporting results in club work are as follows. W. K. Scott, Alamance; U. A. Miller, Alexander; J. W. Cameron, Anson; J. W. Goodman, Jr., Avery; R. K. Craven, Bladen; Charles E. Miller and L. R. Harrill, Buncombe; J. W. Hendricks, Catawba; R. E. Lawrence, Cleveland; J. G. Lawton, Craven; F. W. Risher, Cumberland; O. H. Stanard, Durham; L. B. Altman, Gaston; H. L. Miller, Hertford; N. B. Stevens, Johnston; C. M. Brickhouse, Lenoir; J. G. Morrison, Lincoln; A. R. Morrow, Montgomery; M. W. Wall, Moore; J. P. Herring, New Hanover; J. R. Sams, Polk; L. D. Thrash, Rutherford; R. T. Melvin, Sampson; O. H. Phillips, Stanly; Frank Fleming, Swain; J. W. Lindley, Transylvania; J. C. Anthony, Vance; R. W. Johnston, Washington, and D. H. Osborne, Yadkin.

Work Done Through Organized Clubs

The larger portion of the agricultural club work for the year of 1922 was done through organized groups. More than four-fifths of the members were reached and assisted with their demonstrations through 142 organized clubs. Probably one-fifth of the club members were not members of organized clubs, but more and more our county agents are reaching their club members through organized groups. These organized clubs had the following officers: president, vice president, and secretary-treasurer. The officers were elected by the club members from their own numbers. Moreover, the members of each club assisted the county agent in the selection and appointment of an adult local club leader. Clubs met once each month, as a rule, though a number of agents found it necessary to call the clubs together more frequently than once a month during the early spring months as a means of getting the work started in good order, and in a few of the counties they found it impractical to get good attendance at the clubs during the late summer months when the farm work was rushed most.

Thirty-nine agents reported the enrollment of club members. Of these, twenty-eight secured reports from members showing the results of demonstrations completed.

How They Were Divided

Dividing the club members according to the kind of demonstrations that they carried out shows the following: crop club members, 542; livestock club members, 1,502.

The crop club members were divided as follows: corn, 288; peanuts, 27; Irish potatoes, 106; sweet potatoes, 30; grain sorghum, 8; wheat, 28; (birdlie) beans, 26; peas, 2; soybeans, 4; tomatoes, 2, and seed cotton, 21.

The livestock club members were divided as follows: pigs, 187; fattening demonstrations, 81; growing for breeding, 193; sow and litter, 44; total pig club members, 505; sheep demonstrations, 11; beef cattle, 1; dairy calf, 22; poultry, 963.

The results for the work in the agricultural clubs during the year as shown by the complete reports submitted by the county agents does not show the proportion of effort invested in this work that its importance would merit. However, for the number of reports that were secured from club members the results of the work are very encouraging. For instance, 164 boys in corn club work report an average yield of more than 50 bushels per acre at a cost of approximately 52 cents per bushel. This yield is more than double that of the average farmer in the State of North Carolina, and is considerably more than the average yield for the adult demonstrators. The same can be said largely of the club members reporting with other crops, and also of the splendid work with livestock demonstrations. Only approximately one-half of the county

agents, according to their reports, attempted any work with boys and girls in agricultural clubs. In a number of instances those who did attempt it experienced difficulties in securing the right type of local club leaders to assist them in holding the interest of club members and in giving the instructions for carrying on the work with the several demonstrations. In other cases emergency work made it necessary to neglect the club work after it was started.

Club Encampments

A valuable feature connected with club work is the midsummer encampment. The encampment affords a splendid opportunity for bringing the boys and girls together from each community in the county for wholesome entertainment, recreation, education, and inspiration. It supplies a long-felt need with the average country boy and girl, and has done a great deal to add new interest and life to organized work with boys and girls. These encampments are held during the season of the year at which the boys and girls in the rural communities are least engaged in the farm work and the attendance is generally very good indeed. The site for the encampment is selected so as to entail the least expense in the provision of equipment and at the same time so as to afford the greatest opportunities for carrying out the main purpose of the camp. In a number of communities splendid camps adequately equipped for the purpose have been tendered to the agents for the use of club members without charge. In a number of other places farm-life school buildings and dormitories have been used for encampments. In a few instances the agents procured tents in which to house the club members and hold their encampments. In a number of counties standards of eligibility for attendance at encampments have been put into effect which usually are that the club members are required to have successfully started their demonstration, and to present records for the work done satisfactory to the agents in charge before being permitted to attend the encampment. This has caused a number of boys and girls to work overtime to get their demonstrations in first-rate condition and to keep the reports right up to date in order to be eligible to attend the encampment. During the year 27 encampments, with a total attendance of 2,665, were held. In one instance three counties held a joint encampment, and in three other cases two adjoining counties came together for joint encampments. In all, encampments were held for club members of 32 counties during the year.

Joint Encampments

In a few instances agents of two or three counties have found it advisable to hold joint encampments where centrally located sites for such encampments could be secured. This has meant a great deal to the interest of club members and also to the success of the program of

work. It has enabled the agents to combine their forces for the putting on of more interesting and instructive programs and the bringing together of larger numbers of boys and girls than would be possible where either of the individual agents held an encampment for his local county by itself. In a few instances it has been very successful indeed, and has obviated the necessity for supplying extra assistance for carrying out the program.

Encampments usually last about three days and two nights, during which time is usually given at least one program for the public to which especially the parents of the club members are invited. This part of the camp program has done a great deal to boost interest in boys' and girls' club work.

Club Tours

The agents in a few of the counties last year used school trucks or other means of conveyance, and took large groups of their club members to distant parts of the State to visit points of interest and educational value. They visited the branch experiment stations and outlying test farms in the State that lay enroute on their trips, and had occasion to study the points in connection with the work being done on these test farms. In a number of instances the specialists and experimentalists in charge of the work were on hand to bring out the points of interest in connection with this work. Besides this, the club members visited some of the famous herds of dairy cattle and some of the outstanding poultry farms and herds of swine in the State. They were entertained in a number of instances by chambers of commerce and other civic bodies. The club tour furnishes a new phase to club work in North Carolina, and is one that should be encouraged where it can be done with safety and at a cost which will not prove prohibitive to individual club members. In counties last year where club tours were conducted the tour supplanted the encampment.

Fairs

During the year 144 community fairs, 44 county fairs, and the State Fair were held in this State. At each of these fairs either special classes were provided in which club members were permitted to show the products of their work, or they were allowed to exhibit in the open classes along with the adults. In a number of counties club members were considered at an advantage in showing in the open classes because they have studied the selection, preparation, and exhibition of the products and won over the adults in almost every instance.

The number of counties entering club exhibits at the State Fair during the past year was relatively small. This probably was due to the high rate for transportation of the exhibits to and from the State Fair. However, Craven County club members shipped a solid carload of club pigs and Catawba County club members shipped a solid carload of club poultry to the State Fair this last fall. A large number of smaller

exhibits were sent from several of the counties by club members, but the number is not nearly as large as we would like to have it, or as it would be were we able to secure more favorable rates for transportation.

State Club Short Course

Through the courtesy of the administration of the State Fair and the State College of Agriculture, we were able, in connection with the State Fair held in Raleigh, October 16-21, inclusive, to hold a State agricultural club short course this year. A large tent was provided for the purpose by the fair association. Club members selected from the several counties doing club work came to Raleigh and were the guests of the State College for the week. They put on a demonstration contest using corn, Irish potatoes, poultry, and dairy calf as projects with which to give demonstrations.

Demonstrations with Corn

Four demonstrations with corn by four teams were given. These demonstrations dealt with (1) seed storage and seed treatment by two club members from Gaston County; (2) corn rotations by two club members from Cumberland County; (3) fertilizing corn by two club members from Sampson County; (4) utility factors in seed corn by two club members from Durham County.

Demonstrations with Irish Potatoes

Four demonstrations were given with Irish potatoes: (1) seed selection; (2) grading and packing potatoes by two teams of two club members each from Buncombe County; (3) spraying potatoes, and (4) potato diseases by two demonstration teams of two club members each from Avery County.

Demonstrations with Poultry

Five demonstrations were given with poultry as follows: (1) feeds and feeding by two club members from Craven County; (2) poultry houses and equipment by two club members from Stanly County; (3) sanitation in poultry houses by two club members from Buncombe County; (4) culling the flock by two club members from New Hanover County; (5) candling, grading, packing, marketing, and preserving eggs by two club members from Cleveland County.

Demonstrations with Dairy Calf

Four demonstrations with the dairy calf were given: (1) feeds and feeding the dairy calf; (2) selecting dairy calf; (3) fitting the dairy calf for the show ring by three demonstration teams of two club members each from Catawba County, and (4) sanitary milk production by a demonstration team of two club members from Transylvania County. This gave us a total of 17 demonstrations, all conducted in a large tent erected in the fair grounds. Thousands of people visited the demonstrations and asked questions about the work. The demonstration teams each gave two complete demonstrations per day.

Club Judging Contests

In connection with the short course for club members, a livestock judging contest and a plant identification and seed judging contest were held. One hundred and three club members entered the livestock judging contest and judged six classes of livestock. Their work in this contest consisted of placing the animals and writing the reasons for their placements. In the plant identification and seed judging contest about 60 club members entered. The work in this contest consisted of identifying certain well known forage plants and in placing four entries in each of several kinds of important field and forage plant seeds. The club members made a very creditable showing in each of these contests.

Other Judging Contests Held in the State

In connection with the Sandhill Fair held at Pinehurst in Moore County, a pig club members swine judging contest was held. Thirty-seven club members representing ten or eleven counties entered this contest and placed classes of excellent Berkshire hogs. Another livestock judging contest in which club members participated was the contest held for club members and vocational agricultural students in connection with the State Livestock Show at Statesville the last of November. Six classes of livestock were placed, and the few club members present made a very creditable showing, but owing to the fact that the date of this contest was about the time that agents were required to complete their annual reports for the work done during the year, there was only a small number of club members present.

Value of Judging Contests

These judging contests give the club members a chance to see and to judge really worth-while animals, and to study the points that indicate quality and character in seeds. These are some of the valuable points to be had in this work. The work has proved quite interesting in the past, and it should undoubtedly be encouraged and extended in the future. Each fair should hold judging contests for club members. It would supply a valuable means of training judges for fair work in the future. This could be done under supervision and direction of the county agent and the fair judges and make this a wonderful training for large numbers of interested boys and girls.

What Some of the County Agents and Club Members Say About Their Work

A Poultry Club Boy's Adventure

Bennett Sigmon, a 16-year-old club boy of Catawba County, writes of his poultry club work: "In the spring of 1921 I joined the Killian Poultry Club. Mr. Hendricks put it up to us boys to select our own

breed of chickens. So I began studying catalogs and advertisements in farm papers to decide what kind to select.

"On March 22 I received a card stating that my eggs were at the express office at Newton, seven miles from home, and it raining. Well, next morning it had stopped raining, so I started to walk seven miles through the mud to get my eggs. It was night when I returned home and I wasn't a bit sorry of it, for I felt more like I had walked thirty miles than seven.

"The next morning I set my eggs, and on April 14 eleven baby chicks hatched. I succeeded in raising ten, three cockerels and seven pullets. I fed my chicks on cracked wheat, oats, and corn with meat scraps.

"In the fall I entered 8 of my birds in the Catawba County Fair at Hickory. I received 3 firsts and 2 seconds. Mr. Hendricks carried 2 cockerels and 2 pullets to the Kinston Fair, where I received 2 firsts and 2 seconds, then to the State Fair at Raleigh, where I received 2 firsts and 2 seconds, to the Wilson Fair, where I again received 2 firsts and 2 seconds, a total of 9 firsts and 8 seconds, amounting to $20.50 in prizes.

"When my birds returned home I began force feeding them for eggs, and on December 13 I got my first egg. The total egg yield from my seven pullets for the 7 months was 615 eggs. I began feeding my birds on dry mash composed of equal parts by weight of corn, wheat, and oats with meat scraps added.

"I sold one setting of eggs for $2.50 and eggs on local market for $15. Premiums won $20. Total gross receipts, $37.50, less cost of feed ($10), leaving me a clear profit of $27.50 from my 10 chickens. I have also increased my flock to 35.

"I would say to every boy and girl who wishes to earn money, you need not hesitate to take up poultry club work."

One Boy Organizes a Club

County agent Melvin of Sampson County says: "The boy who, in my estimation, has made the best record in corn club work is Minson Lockamy of Roseboro, R. 2. This boy is the son of a very poor tenant farmer. He joined the club in the community where he lived in 1921 and took cotton as his project. The thing that impressed me about him at first was that apparently he paid no attention to what I said at club meetings, but devoted his time to playing pranks on the other fellows. But pretty soon I received a letter from him inquiring where to get the seed that I had recommended. He did splendid work and turned in one of the best reports which I received this year. In the spring of 1922 he moved to a farm in another section of the county where there was no club, and immediately wrote to me asking me to come over and organize a club at his school. I had been to this school and had found but little interest in club work, so I sent him membership blanks and instructed him to get enough boys lined up and send me their names and I would come

over and organize a club. He wrote within a few days that he had ten boys, also enough girls for a club in home economics, so the home demonstration agent and I went over and organized a club and he was elected president. He has done splendid work as a club officer as well as doing good individual work in the corn club.

"He planted Godwin corn and produced a yield of 70 bushels at a cost of $27.50, making a net profit of $52.80. He made an exhibit at the county fair and won first prize. He attended the fair himself and when he learned that his corn had won first prize he went out and had his picture made and then went to the local newspaper office where he interviewed the editor and got a splendid write-up of his work, all of this on his own initiative. He is saving money to attend the farm-life school next year."

Placing Responsibility

Howard Young of Minneapolis, a strong club member and the president of the Minneapolis club, reported to county agent J. W. Goodman, Jr., his first experience of club work, and explains how things looked when an opportunity was given the boys and girls there to join. He states that there was very little interest until the members were called on to take part in the meeting by electing their own officers and doing the business themselves. This put a new outlook on the proposition; it was their club and they were to be the ones to run it and that is what made it a good thing, as the boys and girls wanted an opportunity to do something themselves, they wanted the personal experience.

Best Record on Corn

County agent Lawrence of Cleveland says: "The best record for corn club boys was made by Clyde Barber, who won $19.50 on ten ears of seed corn at the fairs this fall and a yield of 52 bushels per acre. Clyde expects to furnish seed corn next spring at $3 per bushel for the most of his corn. He has improved his corn by seed selection, and practically every stalk now has two ears."

Club Boys with Cotton

County agent Risher of Cumberland says: "I was standing in the lobby of the National Bank on yesterday, December 19, when in walked one of my club members with his dad to deposit the proceeds of his acre of cotton in the bank as a nest egg for his college education. This little fellow, Alton Boyd Spears by name, was all aglee as he told me the results of his year's work with an acre of cotton, and he used Wannamaker Cleveland, one of the best short-staple varieties. He would not use the seed his father had at home, as they were not selected, but bought his seed from a neighbor who had improved seed that had been purchased from the originator of the variety.

"Alton selected a well drained piece of sandy loam soil and prepared and fertilized it well and worked it thorough and rapid, as he had weevils and he had to pick up and burn lots of squares. This reduced his yield some. Nevertheless, he made a bale of lint weighing 519 pounds and 384 pounds of seed cotton for the two lots of cotton he received yesterday $173.05 and has on hand the seed yet.

"He did not have his total cost, but was sure that his record at home would show a nice profit. His father was kind enough to allow him the total proceeds of the acre provided he would save it and not waste it."

The Runt Pig

County agent J. W. Cameron of Anson writes: "One boy who was given a runt of a pig in the early spring recently sold this pig for $27 for pork, and had the county agent to buy him a purebred gilt with the money he received from the same."

Vance County Club Member

Mr. J. C. Anthony, county agent of Vance, writes: "I have one boy, a corn club member, by the name of Frank Mitchell, Kittrell, N. C., who is fifteen years old and raised 100 bushels of corn on an acre of land. He exhibited his corn and other farm products, consisting of 13 varieties of hay, peas, and beans, and won first prize on his record book ($10). This boy has been with me in two livestock judging contests at fairs, once at the State Fair, Raleigh, where my team won first place, and again at Pinehurst at the Berkshire Congress, where they won fourth place. Altogether he has won $59 in prizes from his club work."

Corn Club Boys

"Down in east Lincoln," says county agent Morrison of Lincoln, "I had a boys' corn club that was very interesting. All the boys worked very hard and their work was very encouraging. When I measured up the corn on the demonstration acre, the yields were very nearly the same, with the exception of one of the boys, Clyde Carter, of Stanley, N. C., R. 1, who made twice as much as any of the others. Carter had made 75⅓ bushels of good corn.

"I ordered the Garrick's Prolific seed for him from Coker's Pedigree Seed Company, and out of 75 bushels of corn there was only three bushels not having two or more ears to the plant. Clyde Carter is a son of a renter and did not have any special advantages. He had a good acre of ground and worked it mighty well and often. The outcome was a great demonstration for the community, as very few farmers in this section made over 25 bushels to the acre. He saved about 50 bushels of good corn for seed and should make a good profit out of it. Carter won the prize for the best acre in the club. I put some of his corn on exposition in Charlotte at The Made-in-Carolina show, and it attracted a lot of attention."

Club Member Cites Dad

"A father of one of the club boys who was very much set in his convictions said that purebred poultry was more of an expense than a profit, and was more of a bother around the farm than a necessity, but was finally persuaded to allow his boy to purchase two settings of Barred Plymouth Rock eggs," reports county agent O. H. Phillips of Stanly County. "These hatched four pullets and nine cockerels, which disappointed the father in that there were not more pullets. However, the eight cockerels were sold for $14, leaving the best one for breeding.

"The boy won $4 with his cockerel and pullets at the Sandhill Fair. This helped to win his father's complete support, and he assisted the boy in fencing up a small lot in which to pen his four pullets and cockerel. The boy raised 65 full-grown chicks from this pen, and he sold his male birds for more than enough to pay for his trouble and feed bill, leaving his 38 pullets as a clear profit. This was accomplished in 18 months."

Banks Cooperate

County agent Lawton of Craven says: "The banks of my county loaned $1,968.24 for pig club work and $306.88 for poultry work. One hundred and nineteen pig club members were enrolled and 124 pigs placed in their care. Fifty poultry club members were enrolled, and 35 of these started with chicks and 15 with eggs.

"At a total cost of $3,511, hogs valued at $10,740 were produced, giving a net profit of $7,229. A net profit of $574 was made on the poultry work.

"The credit of securing this coöperation of the bankers in the club work is due to the county farmers' organization. The investment was a good one. The club members made good with the money, the banks are repaid, and the county is rapidly becoming a livestock center with young men and women trained in club work to manage the livestock successfully."

RECORD OF CROPS REPORTED BY BOYS' CLUBS—(White and Negroes)

Kind of Club	Total Enrollment	Total Number of Members Completing Demonstrations and Reporting	Number of Acres in Demonstrations Completed and Reported	Total Production (Bushels or Pounds)	Average Yield Per Acre (Bushels or Pounds)	Average Cost Per Bushel or Pound	Total Cost of Production	Total Value of Crop	Total Profit
Corn	445	316	399	13,154 bu.	33 bu.	$ 0.443	$ 5,833.80	$ 11,633.41	$ 5,799.21
Peanuts	36	16	12⅝	697.15 bu.	55.2 bu.	.425	287.44	858.15	570.71
Irish potatoes	110	38	6.27	45,730 lbs.	729 lbs.	.009	457.50	1,136.20	678.70
Sweet potatoes	37	35	8	79,770 lbs.	9,970 lbs.	.055	444.82	1,804.00	1,359.18
Grain sorghum	8	6	25	2,500 bu.	60 bu.	.072	180.00	360.00	180.00
Wheat	28	16	10	250 bu.	25 bu.	.50	125.00	312.50	187.50
Birdlie beans	26	15	5	75 bu.	15 bu.	2.25	168.75	316.00	147.25
Peas	2	2	¼	3 bu.	12 bu.	.60	1.80	4.50	2.70
Tomatoes	2								
Soybeans	22	16	13¼	353½ bu.	27 bu.	.18	62.40	394.75	332.35
Soybean hay	1	1	1	2 tons	2 tons	3.00	6.00	60.00	54.00
Tobacco	11	9	9	6,600 lbs.	2,180 lbs.	.031	206.45	1,998.00	1,791.50
Seed cotton	39	35	29½	26,284 lbs.	891 lbs.	.41	1,072.35	3,101.06	2,028.71
Total	767	505	518.89				$ 8,846.31	$ 21,978.57	$ 13,132.26

(RECORD OF LIVESTOCK REPORTED BY BOYS' CLUBS—(White and Negroes)

Kind of Club	Enrollment in Clubs	Total Number of Members Completing Demonstrations and Reporting	Total Number of Animals	Total Initial Weight (Pounds)	Total Final Weight (Pounds)	Average Cost Per Pound	Total Cost	Total Value	Total Profit
Pigs	187	57	786	5,473	12,986	$ 0.06⅔	$ 965.33	$ 1,924.79	$ 1,059.06
Fattening demonstrations	148	69	148	2,079	14,498	.063	918.34	2,228.80	1,310.46
Growing for breeding	193	114	187	9,226	53,344	.075	4,000.80	13,546.33	9,545.53
Sow and litter	75	47	274	4,012	24,184	.093	2,213.04	4,048.11	1,835.07
Sheep—demonstrations	11	8	38					304.00	
Beef cattle—growing for breeding	1	1	1					20.00	
Dairy cattle—growing for breeding	22	2	2	650	1,113	.19	211.75	316.00	104.75
		Number Starting—		Produced					
		With Birds	With Eggs	Mature Birds	Doz. Eggs				
Poultry—demonstrations	1,214	514	700	17,654	11,097½			$ 24,764.86	

Number of pure bred pigs distributed to club boys	269
Number of grade pigs distributed to club boys	189
Number of pure bred calves distributed to club boys	70
Number of grade calves distributed to club boys	17
Number of grade sheep distributed to club boys	18
Number of pure bred poultry distributed to club boys	624
Number of eggs from pure bred poultry distributed to club boys (doz.)	4,099

NEGRO WORK

In a general way negro extension work is conducted similarly to that of the work with white farmers with necessary adaptations to meet their needs.

During the year there have been two removals of agents by transfer to other states. One was promoted as district agent in Virginia and the other took work as local agent in Arkansas. One of the places has been filled. Two new agents have been added during the year with the prospect of three others to come in soon.

At present the organization for extension work with negroes consists of a district agent, sixteen local agents, and a State club agent. The club agent supervises the club work with local agents in a general way, and also directly conducts club work in a number of counties outside of local agent territory. None of the local agents are paid any local travel expenses, this amount being added to their salaries. The district agent and club agent have a specified travel allowance.

In making plans for negro work they are laid out on a broad basis, covering the entire problems of the State, but with flexibility enough to meet any local conditions that may exist. The general plans embrace such problems as soil fertility, the growing of home supplies, improved types of livestock, especially family cows, hogs, and poultry, the getting of more orchards and a good garden for every family. Organization work is for educational, business, and social purposes.

January and February of each year are known as organization periods. At this time organizations of both adults and children are perfected. Plans are now being carried out for making inventories of from 20 to 25 farms in each county where negroes own such farms. In three or five years, or possibly ten years, another inventory will be made of the same farms to ascertain what progress, if any, is being made. Crop records are kept of most demonstrations to show whether such crops are grown profitably.

During the year 2,491 crop demonstrations were conducted on 9,840 acres, with reports from about half of them. The average yield of corn per acre on these demonstrations was 39.4 bushels, compared with the State average of 22 bushels and an average of 45 bushels on demonstrations conducted by white agents.

During the year negro farmers bought coöperatively, through organizations perfected by agents, 75 cars of fertilizer and 76 cars of lime, with a saving of over $8,000. Various other things were bought through the 148 organizations in negro demonstration territory.

Negro farmers are much interested in the buying of land and homes. To assist them in this matter they are using the Federal Farm Loan Association and such other institutions as will assist them in their purchases. The highest record made in the work was that in Wake County, which shows as follows for the year:

From the Federal Farm Loan Association	$150,000
From the Joint-stock Land Bank	28,000
From local banks through credit unions	22,250
Procured by individuals from local banks	4,200
Or a total of	$204,450

These amounts enabled over one hundred farmers to buy or to pay for land already purchased.

During the year two campaigns were conducted, one in the spring and early summer for the planting of summer legumes, and one in the fall for the planting of winter cover crops. As a direct result of the spring campaign, over 2,000 acres were planted to summer legumes, and of the fall campaign, 6,000 acres were planted to winter cover crops, largely legumes. There was a spirited rivalry between the agents to ascertain which could excel in the work.

Each year there are awarded by the district agent, through funds procured from suitable sources, three prizes as follows: To the agent who does the best all-round work a gold medal; to the agent getting planted the most cover crops, a silver medal; the winner this year induced one hundred farmers to plant 1,067 acres to cover crops. To the agent getting the most summer legumes planted a bronze medal is awarded. This work resulted in inducing the planting of about six hundred acres to summer legumes.

Negro farmers are intensely interested in securing extension workers to assist them in their farming operations. This is shown by the fact that in five counties they have raised a moderate amount of funds to help procure an agent. One of the big problems with us is to furnish and pay the number of agents that are being asked for. Negro farmers, as a rule, are very docile and readily follow plans and suggestions made for their benefit.

Livestock Work

This consists mainly of procuring family milk cows, hogs for pork production and poultry in a live-at-home plan. The records show that during the year, through the influence of local agents, there were brought into negro demonstration territory 19 registered bulls and 18 registered cows and heifers. Nothing was done in the way of beef cattle development. With swine, 25 registered boars and 61 registered sows and gilts have been brought in. There were established 42 herds of registered hogs.

With poultry there were 101 demonstrations with 8,425 birds. Farm poultry was improved on 1,125 farms with 15,994 birds. Ten communities have adopted a standard breed of poultry. Thirty-nine poultry houses have been erected and 41 have been remodeled. Sixty-seven flocks have been culled, with the elimination of 868 birds out of 2,415.

Orchard Work

This phase of the work has been satisfactory. Very little has been done with commercial orchards, but home orchards have been promoted in 262 cases, including 3,745 trees. Other work has been done as follows: Orchards inspected by agents, 393 on 162 acres with 10,950 trees; orchards pruned, 112 on 58 acres with 5,114 trees; orchards sprayed, 38 on 15 acres with 1,410 trees; treated for borers, 76 orchards on 16 acres with 3,807 trees; orchards planted, 25 on 8 acres with 775 trees.

Fertilizer, Lime and Manure

Satisfactory work has been done in assisting farmers to make the best use of these things by conducting field demonstrations of growing of crops and by advice.

Farm and Farmstead Improvements

Work of this character is very much needed among negro farmers. Especially in the matter of suitable houses, barns, and other buildings to make themselves and animals comfortable. The records show that through the influence of the agents 70 dwelling-houses have been built and 152 improved, 19 plans furnished and 100 painted or whitewashed; a total of 341. With other buildings, 53 have been erected, 100 improved, 19 plans furnished, and 49 painted or whitewashed; a total of 231.

Some of the other things accomplished under this head are shown as follows:

Home lighting systems installed	11
Home gardens improved	193
Farm and home sanitary conditions improved	1,549
New pastures established (703 acres)	189

Splendid work has been done in the planting or improvement of 2,600 home gardens.

Miscellaneous Work

A few items are given under this head as follows:

Number of farmers' meetings held	923
Meetings of all kinds taken part in	1,798
Attendance	80,486
Field meetings held by agents	389
Attendance at these meetings	10,043

Concerning the matter of improved seed, 551 farms have been furnished with 873 bushels of seed. Of this number, 17 farms have now 3,295 bushels of improved seed for sale.

Various Successful Undertakings

Not very much has been reported under this head. In Gates County the agent specialized during the season on corn growing to enable farmers to supply their home needs cheaply. As a result of this, all the farmers who engaged in the work and planted soybeans and other crops with their corn succeeded in getting two good crops, the beans, peas, etc., paying for the cost of growing the corn, and in most cases gave a profit besides.

Another good feature of the work in that county was the better handling of milk cows in order to make them more profitable. In this connection one farmer stated that he is now getting more milk and butter from two cows than he formerly got from seven.

In Alamance County a negro organization of 89 members bought 7 carloads of fertilizer, or 714 tons, for $7,100, saving thereby $1,000, or about 14 per cent. To secure payment from members who had to buy on time, liens were taken by the organization, and so the organization in turn became responsible to the dealers. The obligations of members who are tenants are assumed by those who are landowners.

A bull association in the county has purchased a purebred Jersey bull, the 12 members each paying $5 for a share in the organization. One of the members keeps the bull and receives his compensation from outside fees. The members of the association pay nothing further in the way of service fees.

In Duplin County, in the Coastal Plains, the local agent induced about 100 farmers to substitute sugar cane growing for that of sorghum. They are well pleased with the matter. In the way of accomplishments by coöperation, three ditches five miles in length were dug in one community; three new roads three miles long were constructed in another. In still another community seven cemeteries were cleaned and beautified, and one schoolhouse built. In showing the location of his work over his county, one agent submitted a map that contains eighteen townships. Crop demonstrations were conducted in fifteen of them.

Negro Club Work

The following report on negro club work was most largely made up by J. D. Wray, negro club agent, both from his individual efforts and those of the local agents through whom he was working in their several counties.

The letters attached at the end of this report are from club members and some adult farmers whom Wray assisted incidentally along with his boys' clubs. They will be found to be full of interest.

The negro club work is conducted under the same general plans as that of white clubs, with the exception that there are two parts of it. One, that which is conducted by local or negro agents, and that which

is conducted outside of local agent territory directly by the negro State club agent. All the work is based on the same plans and, almost without exception, is conducted through organized clubs. There is one feature of negro club work that differs from that of the white, in that the adults and parents of club members want also to become members of the club. In many cases parents refuse to let their children join the clubs unless they themselves become members. That feature is handled all right where we have local agents, but where we have no local agents it is difficult to keep adults out of club work.

One valuable feature of this work this year has been the large number of purebred pigs that have been gotten for the members. Another good feature is that of the interest shown in the selection of good seed corn, and the saving of soybeans and cowpeas for planting purposes.

The needs of home improvements for negro farmers are so great that negro agents have to do some of that where there are no women agents. This is true with reference to fixing up the fences, beautifying the home grounds, general clean-up of the premises, and even extends so far as to help in building new farm residences. Negroes, as a rule, are very grateful for services rendered them, as shown by extracts of letters from committees, to State club agent J. D. Wray, and attached hereto. One of the strong and noticeable features of the work, and which is also brought out in these letters, is that of creating a demand for local or county agents.

Agents have recently been started in three new counties as a result of club work in these counties, the farmers themselves in each case putting up some funds to assist in getting the agent.

The following statistics show in a more definite form what has been accomplished in this way:

RECORDS OF CROPS REPORTED BY FARM MAKERS' CLUBS—(Negro)

Kind of Club	Total Enrollment	Total Number of Members Completing Demonstrations and Reporting	Number of Acres in Demonstrations Completed and Reported	Total Production (Bushels or Pounds)	Average Yield Per Acre (Bushels or Pounds)	Average Cost Per Bushel or Pound	Total Cost of Production	Total Value of Crop	Total Profit
Corn	1,049	497	497	23,607.5 bu.	47½ bu.	$ .31	$ 7,318.32	$ 23,607.50	$ 15,289.18
Peanuts	10	5	5	500 bu.	100 bu.	.35	175.00	500.00	325.00
Peanut hay	10	5	5	10 tons	2 tons	1.50	15.00	150.00	135.00
Alfalfa	5	5	5	15 tons	3 tons	2.50	37.50	450.00	412.50
Oats and vetch	55	23	35½	87½ tons	2 tons	3.75	328.12	4,375.00	4,046.88
Pea hay	67	37	69	180 tons	2¼ tons	3.00	540.00	540.00	4,860.00
Soybeans (grown in corn)				113½ bu.	10 bu.	.25	28.37	283.75	255.38
Soybean hay	43	22	22	50 tons	2.22 tons	2.50	125.00	1,500.00	1,375.00
Sudan grass	1	1	1	1 ton	1 ton	4.00	4.00	16.00	12.00
Oat hay	90	40	80	170 tons	2.15 tons	3.50	605.00	4,250.00	3,645.00

RECORD OF LIVESTOCK REPORTED BY FARM MAKERS' CLUBS—(Negro)

Kind of Club	Enrollment in Clubs	Total Number of Members Completing Demonstrations and Reporting	Total Number of Animals	Total Initial Weight (Pounds)	Total Final Weight (Pounds)	Average Cost Per Pound	Total Cost	Total Value	Total Profit
Pigs:									
Fattening demonstrations	235	121	122	6,100	30,940	$ 0.10½	$ 3,248.70	$ 4,641.00	$ 1,392.30
Growing for breeding	*287	117	117	4,680	33,400	.08	2,672.00	4,680.00	2,008.00
Sow and litter			41	8,200		.07½	615.00	1,021.00	406.00
		Number Starting—		Produced					
		With Birds	With Eggs	Mature Birds	Doz. Eggs				
Poultry—demonstrations	927	185	130	3,156	9,467			$ 3,156.00	†

Number of pure bred pigs distributed to club boys	117
Number of grade pigs distributed to club boys	41
Number of pure bred poultry distributed to club boys	335
Number of eggs from pure bred poultry distributed to club boys (doz.)	25

*The same members had sows with litter. †Records did not show proper cost of poultry.

LETTERS FROM CLUB MEMBERS

BATTLEBORO, N. C., R. 2, Box 38, November 28, 1922.

MR. J. D. WRAY,

DEAR SIR:—I am very proud of the privilege of saying just a word in behalf of the demonstration work. It has been a great benefit to me in many ways. In my garden, and especially among my poultry, I have had the best results this year I have ever had raising spring chickens; also I have some very pretty little ones for Christmas. Yet I see more to do and some of the interesting things are: be very careful and get a good breed of everything you raise, poultry or pigs. I am unable to say just how much I have been benefited, and also the community in which I live, so I will close.

Yours truly,
(Signed) NANIE JONES.

ROCKY MOUNT, N. C., November 20, 1922.

DEAR MR. WRAY:—As I am one of your club members, I will write you a letter to let you know how your demonstration work had helped me this year. I have decided to keep your instructions; they are valuable and worth many dollars. I guess I would have been more successful this year if we had had some rain. I am thankful I have done as well as I have. It has caused me to work very hard with your demonstration. I have had a very nice garden. It enables me to have three crops of cabbage and we are getting out more now ready to begin growing. I also have lots of rutabagas and turnips.

Your club member,
(Signed) FRANK BAKER.

W. Q. MCCAULEY:—It affords me no little pleasure to write you in regards to the club making. It has been a great advantage in my part of the country this year. The people all around came to see my corn plat and many others out of the club spurred up trying to grow a nice plat.

MRS. LEAH H. HILLIARD:—I have been successful this year by following your advice. I raised one hundred and fifty chickens, that is more than I ever raised since I have been in the poultry business. I would not take $300 for them. My garden was just fine. I thank you very much.

ALLEN HILLIARD:—I am proud to say that you have been a great help to me and I heartily appreciate it, as I am able to make my report of corn, fifty-one and a half bushels to an acre. As I have been farming 6 years and have not been making but 20 bushels to one acre.

M. L. BRYANT:—In regard to your demonstration work, I feel like I have been greatly benefited by taking your instructions. Now in regards to my corn, where I have been making 25 bushels per acre, now I am making 60 bushels per acre. My livestock seems to be very prosperous. We have raised more poultry than we have in some time.

H. H. HILLIARD:—I am very glad to say that I have been benefited five hundred dollars worth since you have been coming to us. I made fifty bushels of corn to the acre. I have a plenty sweet potatoes, Irish potatoes, and vegetables for the winter.

JOHN H. HENDERSON:—I am under the impression that the demonstration work has profited this section not less than $10,000, because we have learned that there is something we can do that will produce a livelihood except tending a world of cotton.

Our farm products for the past have been cotton, corn, peanuts, cowpeas, and potatoes. The land never was broken and never cultivated properly, so you will see the condition of this country change if you will continue your visits.

NASHVILLE, N. C., November 20, 1922.

PROF. J. D. WRAY, Greensboro N. C.

DEAR SIR:—In regard to your service to our farmers in Nash County this year, I wish to say that we have made good by following your instructions. We have made more corn than we ever made before and cultivated less land. Our rye and other grains have shown us how valuable your services are.

As to our cotton, we made good crops by following your teaching. We made a great deal more than those that did not follow your instructions. This shows that there is something in the department's method of farming. I made the biggest potatoes I ever saw in my life. I was able to feed 13 persons at one meal with one of them. I am fifty-two years old, but I never saw anything like this in the way of a potato before.

We seem to have had general prosperity under your leadership. Mr. Wray, we want you to continue your services with us in 1923. I beg to remain,

Yours very truly,
(Signed) S. D. HILLIARD.

SMITHFIELD, N. C., November 21, 1922.

PROF. JOHN D. WRAY,

DEAR SIR:—I wish to tell you how I appreciate your work for us in Johnston County. In your March meeting you aroused my ambition to grow better gardens and plenty of food and feedstuffs; so beginning April 26, my garden and odd things have kept up my grocery bill and current expenses; also I have the best supply of corn and feed I have had in years.

I see that I can make farming pay if I never grow any more cotton and tobacco. Professor Wray, I feel very grateful to you for the help you have been to me and my people; only I wish we had a whole-time county agent, it would mean so much to Johnston County.

Yours truly,
(Signed) JOHN W. MITCHENER, JR.

(NOTICE.—An agent is now at work in the county.)

ASHEVILLE, N. C., BUNCOMBE COUNTY, November 28, 1922

MR. JOHN D. WRAY,

DEAR SIR:—I can say with truth that I have been greatly benefited by following your instructions on the culture of corn and garden. Had I not taken your advice I would have had much less corn than what I have. I have a good garden now. I am asking God and those who are in authority that you may remain our State agent for many years to come.

Very truly yours,
(Signed) GEORGE W. ASKEW.

GASTONIA, N. C., December 10, 1922.
727 North York Street.

PROF. JOHN D. WRAY, Greensboro N. C.

DEAR SIR:—Having read a letter from you to the farmers of our State, it might be of interest to more than yourself if I let you know how it impressed me. If you can recall a letter written in 1919 or 1920, you advised farmers not to buy high-priced livestock, fertilizers, vehicle, wagons and buggies upon the assumption that they would get high prices for their cotton crop. It was stated in your letter that values would reduce and cotton prices would drop and farmers would suffer because of the inflation of the dollar. It was to my mind a prophecy from the fact the thing really happened and many farmers who did not hear the warning suffered much embarrassment.

Prophesy again.

Respectfully yours,
(Signed) PAUL A. BIGGERS.

BATTLEBORO, N. C., November 11, 1922.

PROFESSOR WRAY,

DEAR SIR:—I feel that it is my personal duty to write you concerning my progress in poultry and gardening. I have taken your instruction about poultry and now have the Rhode Island Red chickens and I wont take $3 a piece for them, but I only paid $1.50 a setting for the eggs. I am going to do away with the scrub chickens and have all improved stock. I feel now that I have been benefited $50 worth, my garden is fine.

I am glad to say that I have been benefited so much I can't hardly estimate it. By reason of your instructions the garden is near the house, my husband had it away in the field last year, and I had to go so far to get my vegetables together until I was always worried out at noon, but I can say that he has taken your instructions, and I feel that you have caused our home to be happy.

I hope that you will continue to come to us.

Yours truly,
(Signed) MRS. L. D. HILLIARD.

P. S.—We feel that we are also benefited in the educational work.

BATTLEBORO, N. C., R. 2, Box 38, November 28, 1922.

MR. WRAY,

DEAR SIR:—I am trying to write a few lines to let you know how well pleased I am for being a member of the corn club. My corn all drowned last summer. I followed your instructions in cultivating and I gathered 25 bushels.

One thing that has been a great hindrance to me is the food proposition. I find if I follow your instructions I can raise plenty of food and enrich my land so it will produce better crops. Again, I would like to say for the past few years this country has been in debt and knows no way out. But by your instructions it is shown that the only way out is to raise food and feed.

I bought a thoroughbred pig, but wish to keep him to raise from and not to kill. I am very much pleased with the improved stock and realize how much I have lost by using scrubs.

Very truly yours,
(Signed) W. A. JONES.

ROCKY MOUNT, N. C., November 11, 1922.

MY DEAR MR. WRAY:—I am writing to let you know how much you helped our community.

Now, as to farming: I feel that it has helped me to the extent of 50 per cent. Because where we have bought corn and hay heretofore, you have

caused us to raise it. In so doing I feel that you have caused our farms to be improved.

Now, as to livestock: By raising plenty of corn and hay, we can feed our team better, and one mule does the work of two. When we have plenty of home-made hay, it causes our cows to give more milk and butter. We raise more feedstuff, and get more. So I feel that our livestock is 50 per cent better.

Now as to home life and educational work: I feel by having had your instructions this year we have learned to make more stuff on less land, thereby giving our wives more time to keep the home in better order, and all the children are not kept out of school all the fall. So the way I see it, by your coming to our Red Oak community I feel that our club and adult work in regard to farming, livestock, home, and educational work has been increased at least 50 per cent.

This is from one of your Red Oak community members.

W. L. LYON.

P. S.—I am hoping that the work may continue.

BATTLEBORO, N. C., November 27, 1922.

DEAR SIR:—I will write you just a few lines to let you know that we are proud of having you with us this year and your work in the corn club and other clubs has helped us wonderfully along all lines, and we hope to have you with us another year.

Mr. Wray, I valued that corn at $5 per barrel, average 37 bushels per acre. So I wont say any more at the present.

Yours as ever,
S. J. THOMPSON,
R. 2, Box 39.

WHITAKERS, N. C., R. 5, November 26, 1922.

PROF. JOHN D. WRAY, Greensboro, N. C.

DEAR SIR:—I am writing you, as I promised, relative to the progress derived from your advice given some time ago. You will also find a picture of my home and back yard in separate package.

If you can use it to any advantage in fostering the club work, of course you know I will appreciate it.

After listening to an address delivered by you and Professor Inborden four years ago, the picture will show the result of your advice relative to home comforts and educating our children. The next day after you spoke I drew the plan of my eight-room home, and decided at once to put three children in high school. During the high prices of tobacco and cotton in 1918, 1919, and 1920, I had somewhere to use the money.

I also have a plant that furnished light for both house and lot. There has been some improvement since these pictures were made.

Following your advice relative to autos, I don't owe a penny on anything I present to you. I certainly enjoyed your address given at Red Oak, Thursday (August 24, 1922). We really had a good time.

Yours as ever,
(Signed) FRANK COOPER.

P. S.—Please let me know at once whether or not you received those pictures.

SUMMARY

COUNTY ORGANIZATIONS

(Negro Work)

Is there a central county committee supporting your work? Yes, in 7 counties.
Does this committee help you make a county plan of work? Yes, in one county.
How long has this county organization been in existence? 12 years and 2 months.

Number of communities in your county	242
How many community farmers' clubs have you assisted in organizing this year?	57
Total membership	1,748
How many community farmers' clubs have you in your county?	148
Total membership	6,617
How many community farmers' clubs have ceased to exist during the year?	12
How many of these clubs are organized so as to include the farmer's wife, children, and others in their membership?	62

Are these community farmers' clubs dependent on the county agent for their existence and the continuation of their efforts? 10 are.
Does each club have a community plan or program of work? 4 have.

COOPERATIVE BUYING AND SELLING ORGANIZATIONS

How many of your farmers' organizations buy and sell coöperatively.... 44
Have you attempted to keep a bulletin board in your office, listing things for sale and things wanted? 8 agents have.
Have you used the market news service of the U. S. Department of Agriculture on your State market news service? 13 agents have.

	Quantity				Value	Saving
	Cars	Bushels	Pounds	Tons		
Bought	16	1,473	93,400	1,271	$ 11,616.36	$ 2,303.70

CORN

Number of demonstrators	526
Number of demonstrators reporting	367
Total acreage of corn grown under improved methods on demonstration farms	2,380
Average yield per acre on demonstrations (bushels)	39.4
Estimated average yield for entire county (bushels)	19
Increased yield on demonstrations over ordinary methods (bushels)	20.4
Number of coöperators	715
Total acreage of corn grown under improved methods by coöperators	4,435
Average yield per acre on demonstrations by coöperators (bushels)	25

Number of farmers testing seed corn for germination	74
Number of bushels so tested for germination	64
How many farmers planted selected seed?	405
Acreage planted with selected seed	1,671
Number of farmers you have influenced to select seed for next year's crop	896
Estimated amount of seed selected (bushels)	1,490
Number who turned under cover crops on their demonstration acres	221
Number of acres harvested for silage	20
Yield per acre harvested for silage (tons)	5
Number of acres "hogged down"	92
Estimated value per acre when utilized this way	$45
Number of acres treated for diseases or insect pests	10
On how many farms have you introduced the growing of corn or improved cultural methods?	858
Number of communities in which corn demonstrations were conducted	174

COTTON

Number of demonstrators	186
Number of demonstrators reporting	154
Total acreage grown under improved methods on demonstration farms	563
Average yield per acre on demonstration farms (pounds seed cotton)	1,247
Estimated average yield for entire county (pounds seed cotton)	618
Increased yield per acre on demonstrations over ordinary methods (pounds seed cotton)	629
Number of coöperators	517
Total acreage grown under improved methods by coöperators	3,761
Average yield per acre by coöperators (pounds seed cotton)	784
Number of farmers testing seed cotton for germination	21
Number of bushels so tested	133
Number of demonstrators who planted pure or selected seed	137
Acreage planted with pure or selected seed	548
Number of farmers you have induced to field select seed for next year's crop?	139
How many turned under cover crops on their demonstration acres?	107
Number of acres treated for diseases or insect pests	2,000
Have you been able to get the farmers in any community to grow but one variety of cotton? 2 agents have.	
On how many farms have you introduced the growing of cotton or improved cultural methods?	584
Number of communities in which cotton demonstrations were conducted	70

TOBACCO

Number of demonstrators	83
Number of demonstrators reporting	75
Total acreage in demonstrations	162
Average yield per acre (pounds)	820
Estimated average yield per acre for entire county (pounds)	433
Increased yield per acre of demonstrations over ordinary methods (pounds)	387
How many farmers have you induced to plant pure or selected seed?	72
Acreage planted with pure or selected seed	279
How many farmers treated tobacco seed for disease?	8
How many acres did this treated seed plant?	33.5

On how many farms have you introduced the growing of tobacco or improved cultural methods?	44
Number of communities in which tobacco demonstrations were conducted	33

TOMATOES

Number of demonstrators	10
Number of demonstrators reporting	8
Total acreage in demonstrations	4
Average yield per acre (bushels)	55
Estimated average yield per acre for entire county (bushels)	20
Increased yield per acre of demonstrations over ordinary methods (bushels)	35
How many farmers have you induced to plant pure or selected seed?	9
How many farmers have you induced to field select seed for next year's crop?	13
Acreage planted with pure or selected seed	1
How many tomato farmers did you influence to adopt a rotation system?	3

SMALL GRAINS

(Oats, Wheat, Rye, Barley, Buckwheat)

Oats

Number of demonstrators	285
Number of demonstrators reporting	527
Total acreage grown under improved methods on demonstration farms	711
Average yield per acre on demonstrations (bushels)	24
Estimated average yield per acre for entire county (bushels)	20
Increased yield per acre on demonstrations over ordinary methods (bushels)	4
Number of coöperators	371
Total acreage grown under improved methods by coöperators	2,103
Average yield per acre by coöperators (bushels)	20
Number of farmers testing seed for germination	50
Number of bushels so tested	266
Number of demonstration acres threshed for grain	85.25
Acreage planted with pure or selected seed	912.5
Number of demonstration acres cut for hay	334.5
Average yield of cured hay per acre on demonstrations (tons)	1.2
Increase per acre of cured hay on demonstrations over ordinary methods (tons)	0.5
Number of acres grazed off	38.5
Estimated value per acre of grazing	$27
Number of acres turned under for soil improvement	25
How many bushels of seed were treated for smut?	198
On how many farms have you introduced the growing of small grains or improved cultural methods?	586
Number of communities in which demonstrations were conducted	72

Wheat

Number of demonstrators	78
Number of demonstrators reporting	54
Total acreage grown under improved methods on demonstration farms	298

Average yield per acre on demonstrations (bushels)	17
Estimated average yield per acre for entire county (bushels)	11
Increased yield per acre on demonstrations over ordinary methods (bushels)	6
Number of coöperators	185
Total acreage grown under improved methods by coöperators	1,203
Average yield per acre by coöperators (bushels)	11
Number of farmers testing seed for germination	23
Number of bushels so tested	300
Number of demonstration acres threshed for grain	178
Acreage planted with pure or selected seed	468
How many bushels of seed were treated for smut?	320
On how many farms have you introduced the growing of small grains or improved cultural methods?	313
Number of communities in which demonstrations were conducted	37

Rye

Number of demonstrators	198
Number of demonstrators reporting	137
Total acreage grown under improved methods on demonstration farms	1,371
Average yield per acre on demonstrations (bushels)	19
Estimated average yield per acre for entire county (bushels)	11
Increased yield per acre on demonstrations over ordinary methods (bushels)	7
Number of coöperators	213
Total acreage grown under improved methods by coöperators	1,253
Average yield per acre by coöperators (bushels)	16
Number of farmers testing seed for germination	147
Number of bushels so tested	23
Number of demonstration acres threshed for grain	87.5
Acreage planted with pure or selected seed	428.5
Average yield of cured hay per acre on demonstrations (tons)	1
Increase per acre of cured hay on demonstrations over ordinary methods (tons)	4.5
Number of acres grazed off	988.5
Estimated value per acre of grazing	$13
How many bushels of seed were treated for smut?	18
On how many farms have you introduced the growing of small grains or improved cultural methods	327
Number of communities in which demonstrations were conducted	87

HAY, FORAGE, OR COVER CROPS

Alfalfa

Number of demonstrators	5
Number of demonstrators reporting	4
Total acreage in this crop on demonstrations	7.5
Average yield per acre on demonstrations (tons of cured hay)	3
Number of acres cut for hay	6
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	20
Number of communities in which demonstrations were conducted	24

Clover

Number of demonstrators	144
Number of demonstrators reporting	111

Total acreage in this crop on demonstrations	532
Average yield per acre on demonstrations (tons of cured hay)	13.5
Estimated average yield per acre for entire county (tons of cured hay) *	143
Number of acres cut for hay	148
Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	3.5
Number of acres grazed off	57
Estimated value per acre of grazing	$136
Number of coöperators	210
Total acreage grown by coöperators	514
Average yield per acre by coöperators (tons of cured hay)	9
How many acres (if legume) were inoculated?	312
How many farmers ordered inoculating material through you from U. S. Department of Agriculture?	29
How many demonstration acres were turned under for soil improvement?	150.5
Estimate total number of acres in county turned under by agent's advice	445
How many acres were sown this fall?	1,114
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	669
Number of communities in which demonstrations were conducted	79

Grasses (Single or Mixed)

Number of demonstrators	220
Number of demonstrators reporting	171
Total acreage in this crop on demonstrations	684
Average yield per acre on demonstrations (tons of cured hay)	16
Estimated average yield per acre for entire county (tons of cured hay)	10.25
Number of acres cut for hay	160.5
Increased yield per acre of demonstrations over ordinary methods (tons of cured hay)	4
Number of acres grazed off	113.75
Estimated value per acre of grazing	$161
Number of coöperators	76
Total acreage grown by coöperators	147
Average yield per acre by coöperators (tons of cured hay)	5.75
How many acres (if legume) were inoculated?	113
How many farmers ordered inoculating material through you from U. S. Department of Agriculture?	23
How many demonstration acres were turned under for soil improvement?	35
Estimate total number of acres in county turned under by agent's advice	67
How many acres were sown this fall?	101
On how many farms have you introduced the growing of hay, forage, or cover crops, or improved cultural methods?	187
Number of communities in which demonstrations were conducted	41

SUMMER LEGUMES

Cowpeas

Number of demonstrators	340
Number of demonstrators reporting	283

Total acreage of this crop grown under improved methods on demonstrations	1,725
Average yield per acre on demonstrations (bushels of seed)	12
Average yield per acre on demonstrations (tons cured hay)	2
Estimated average yield per acre for entire county (bushels of seed)	8
Estimated average yield per acre for entire county (tons cured hay)	1.6
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	4
Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	0.4
Number of coöperators	366
Total acreage grown under improved methods by coöperators	1,408
Average yield per acre by coöperators (bushels of seed)	10
Average yield per acre by coöperators (tons cured hay)	1.7
Acreage planted with pure or selected seed	1,325
Total acreage of demonstrators and coöperators threshed for seed	211
Total acreage of demonstrators and coöperators cut for hay	1,381
Number of acres grazed off	140
Estimated value per acre of grazing	$22
Total number of acres turned under for soil improvement	3,025
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	2,084
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	1,021
Number of communities in which demonstrations were conducted	107

Soybeans

Number of demonstrators	147
Number of demonstrators reporting	127
Total acreage of this crop grown under improved methods on demonstrations	696
Average yield per acre on demonstrations (bushels of seed)	20
Average yield per acre on demonstrations (tons cured hay)	2.6
Estimated average yield per acre for entire county (bushels of seed)	16
Estimated average yield per acre for entire county (tons cured hay)	2
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	4
Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	0.6
Number of coöperators	170
Total acreage grown under improved methods by coöperators	574
Average yield per acre by coöperators (bushels of seed)	13
Average yield per acre by coöperators (tons cured hay)	2.4
Number of farmers testing seed for germination	4
Total number of bushels seed so tested	16
Acreage planted with pure or selected seed	765
Total acreage of demonstrators and coöperators threshed for seed	323
Total acreage of demonstrators and coöperators cut for hay	401
Number of acres grazed off	501
Estimated value per acre of grazing	$30
Total number of acres turned under for soil improvement	31.5
Total number of acres inoculated—by department cultures	2
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	1,589
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	694
Number of communities in which demonstrations were conducted	93

Velvet Beans

Number of demonstrators	23
Number of demonstrators reporting	17
Total acreage of this crop grown under improved methods on demonstrations	151
Number of coöperators	21
Total acreage grown under improved methods by coöperators	50
Acreage planted with pure or selected seed	123
Number of acres grazed off	30
Estimated value per acre of grazing	$13
Total number of acres turned under for soil improvement	79
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	416
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	75
Number of communities in which demonstrations were conducted	28

Peanuts

Number of demonstrators	72
Number of demonstrators reporting	39
Total acreage of this crop grown under improved methods on demonstrations	276
Average yield per acre on demonstrations (bushels of seed)	35
Average yield per acre on demonstrations (tons cured hay)	3
Estimated average yield per acre for entire county (bushels of seed)	25
Estimated average yield per acre for entire county (tons cured hay)	2
Increased yield per acre on demonstrations over ordinary methods (bushels of seed)	10
Increased yield per acre on demonstrations over ordinary methods (tons cured hay)	1
Number of coöperators	96
Total acreage grown under improved methods by coöperators	290
Average yield per acre by coöperators (bushels of seed)	25
Average yield per acre by coöperators (tons cured hay)	3
Acreage planted with pure or selected seed	244
Total acreage of demonstrators and coöperators threshed for seed	61
Total acreage of demonstrators and coöperators cut for hay	72
Number of acres grazed off	206
Estimated value per acre of grazing	$35
Total number of acres turned under for soil improvement	3
Give estimate of the number of acres in your territory which were planted this year to this crop due to your influence	397
On how many farms have you introduced the growing of summer legumes or improved cultural methods?	313
Number of communities in which demonstrations were conducted	27

IRISH POTATOES

Number of demonstrators	37
Number of demonstrators reporting	31
Total acreage of potato demonstrations	31.5
Average yield per acre on demonstrations (bushels)	95
Estimated average yield per acre for entire county (bushels)	42
Estimated number of acres planted with treated seed	10
Estimated number of acres on which foliage was treated for diseases and insect pests	19

How many farmers used certified seed through your influence?	27
Total acreage planted with certified seed	26
On how many farms have you introduced the growing of Irish potatoes or improved cultural methods?	44
Number of communities in which Irish potato demonstrations were conducted	23

SWEET POTATOES

Number of demonstrators	157
Number of demonstrators reporting	120
Total acreage of potato demonstrations	247
Average yield per acre on demonstrations (bushels)	141
Estimated average yield per acre for entire county (bushels)	88
Estimated number of acres planted with treated seed	500
Estimated increased acreage this year over last year due to county agent's work	1,219
How many storage houses built this year?	2
Total capacity of these storage houses (bushels)	1,800
How many storage houses in county?	6
Total capacity of storage houses in county (bushels)	26,602
Total number of bushels put in storage this year (bushels)	31,800
On how many farms have you introduced the growing of sweet potatoes or improved cultural methods?	467
Number of communities in which sweet potato demonstrations were conducted	65

ORCHARDS

Number of demonstration home orchards:	
Apple	86
Peach	142
Other	34
Total number of trees in these demonstrations	262

	Orchards	*Acres*	*Trees*
Orchards inspected by agent	393	162.5	10,950
Orchards pruned due to your influence	112	58	5,114
Orchards sprayed due to your influence	38	15.5	1,410
Peach orchards treated for borers due to your influence	76	16	3,807
Orchards planted due to your influence	25	8.25	775
Total	644	260.25	21,326

How many commercial orchards in your county (peach)	1,200
How many trees did you actually spray?	241
How many trees did you actually prune?	844
How many trees did you actually worm?	193
Estimated value of increased production due to demonstration methods	$1,640
Number of communities in which orchard demonstrations were conducted	36

HORSES

How many registered jacks secured due to your influence?	7
How many registered brood mares secured due to your influence?	18

How many horses or mules in these demonstrations 34
How many horses or mules fed and cared for according to methods you have advocated? 200
How many purebred jacks in county now? 3

DAIRY CATTLE

How many head of registered *bulls* have been secured this year through your influence? 19
How many head of registered *cows* or *heifers* have been secured this year through your influence? 18
How many head of purebred dairy cattle have you assisted your farmers in selling this year—through *individual sales?* 13
How many head of purebred dairy cattle have you assisted your farmers in selling this year—through *group sales?* 2
How many high-grade dairy cows have been secured this year through your influence? 17
How many cows have been tested by individuals at your instance to determine the profitable milk producers? 59
Do you carry or own a Babcock tester? 1 agent has.
How many farmers have been induced to feed a better balanced ration to their stock? 156
How many head of stock so fed? 526
How many demonstrations in dairy work have you supervised? 51
How many cows in these demonstrations? (Report results under "Remarks") 39
How many purebred dairy bulls in the county now? 27
How many purebred dairy cows in the county now? 292
How many dairy bull associations established this year? 1
Number of members in these associations 12
Number of bulls in these associations 1
Total number of cows kept by members of these associations 15
Total number of bull associations now in operation in your county 5
Number of communities in which dairy cattle demonstrations were conducted 2

HOGS

How many head of registered *boars* have been secured this year due to your influence? 25
How many head of registered *sows* or *gilts* have been secured this year due to your influence? 61
How many head of purebred hogs have you assisted your farmers in selling this year—through *individual sales?* 106
How many head of purebred hogs have you assisted your farmers in selling this year—through *group sales?* 42
How many herds of purebred hogs have been started through your influence? 42
How many hog-feeding demonstrations did you supervise? 38
How many hogs in these demonstrations? 309
On how many of these demonstrations were records kept? 33
How many farmers used self-feeders secured at your suggestion? 8
How many farmers have you induced to start the growing of grazing crops for hogs? 592
Estimate number of hogs fed or cared for according to methods which you advocated 1,889
Give number of purebred boars in county now 144
Number of communities in which hog demonstrations were conducted 27

SHEEP AND GOATS

How many head of purebred sheep and goats have you assisted your farmers in selling this year—through *group sales?*	2
Number of purebred rams in county now	40
Number of purebred ewes in county now	45

POULTRY

Number of poultry demonstrations		101
Number of each kind of poultry grown and cared for according to methods which you advocated:		
Chickens	7,779	
Ducks	30	
Guineas	340	
Turkeys	236	
Geese	40	
		8,425
On how many farms has poultry management been improved as a result of your work?		1,028
How many birds on these farms?		15,994
How many communities have adopted a standard variety of poultry?		10
How many flocks culled through your efforts		67
Number of birds in flocks culled		2,415
Number of birds eliminated through culling		868
How many farmers were induced to raise standard-bred poultry this year?		144
How many demonstrators were induced to practice early hatching?		205
How many winter feeding demonstrations?		78
Number of birds in these demonstrations?		2,250
Number of new poultry houses erected at your suggestion		39
Number of poultry houses remodeled at your suggestion		41
Number of communities in which poultry demonstrations were conducted		40

LIVESTOCK DISEASES AND PESTS

How many demonstrations have been conducted through your influence in treating or testing livestock for the control of the following:

	Demonstrations	**Animals treated*
Cattle:		
Digestive and other troubles	.....	11
Ticks	4	3
Lice	2	3
Hogs:		
Cholera (single treatment)	3	3
Cholera (simultaneous treatment)	2	71
Digestive and other troubles	3	30
Worms	3	74
Lice	80	122
Mange	3	13
Sheep:		
Digestive and other troubles	.....	6
Grubs	.....	3
Ticks	.....	1

	Demonstrations	**Animals treated*
Horses:		
Digestive ailments	6	6
Accidents	2	7
Other troubles	6	8
Totals	114	361

State in how many of the above demonstrations you actually treated livestock to demonstrate the method of treatment and the number of animals actually treated by you:

Hogs, for cholera	2	30
Totals	2	30

Have you instruments for such demonstrations? 2 agents have.

*Include all animals treated through your influence.

FERTILIZERS

How many farmers consulted you regarding the use of fertilizers?	2,217
How many fertilizer demonstrations are the farmers conducting with you?	182
Total acreage in these demonstrations	1,167
How much fertilizer used on such demonstrations (tons)?	184
How many communities have you influenced to buy fertilizes cooperatively?	43
Quantity bought coöperatively (tons)	2,267
Value of fertilizer bought coöperatively (actual price paid by coöperative purchase)	$26,325
Total amount saved by coöperative purchases	$4,279
Number of farmers home-mixing fertilizer on your advice	192
Estimated number of tons home-mixed	618
Estimated saving to farmers (per ton)	$9
Number of communities in which fertilizer demonstrations were conducted	42

MANURE

How many farmers have you induced to take better care of farm manure?	520
How many have provided manure sheds at your suggestion?	52
How many are composting farm manure and waste products?	695
How many manure spreaders have been secured this year through your influence?	3
How many farmers are using phosphate or other material for reenforcing farm manure?	503
Number of communities in which manure demonstrations were conducted	76

SILOS

How many silos are in county now?	11
Of the number of silos in county now there are:	
Tile	1
Cement	6
Stave	4
Total	11

LIME

Number of demonstrators	87
Number of demonstrators reporting	63
Total number of acres in lime demonstrations	492
How many farms, other than demonstrators, used lime or limestone this year due to your influence?	132
Quantity of burned lime or limestone used (tons)	929
Total number of acres treated this year	431
Number of lime sheds constructed as a result of your work	2
Number of carloads shipped into your county	76
Number of farms on which soil was treated for acidity	92
Number of communities in which lime demonstrations were conducted	25

FARM AND FARMSTEAD IMPROVEMENTS

(Things Done With Agent's Assistance and Advice)

	Dwelling	*Other*
Number of buildings erected	70	63
Number of farm buildings improved	152	100
Number of new building plans furnished	19	19
Number of farm buildings painted or whitewashed	100	49
	341	231

Number of home water systems installed this year		3
Total number of such systems in county now		52
Number of home lighting systems installed in county this year		11
Total number of such systems in county now		36
Number of home grounds improved		193
Number of farm and home sanitary conditions improved	661	
Number of homes screened against flies and mosquitoes	575	
Number of sanitary privies erected	313	
		1,549

Number of telephone systems installed	4
Number of farmers furnished plans and induced to adopt systematic crop rotations	651
Total acreage of such rotations	4,359
Number of new pastures established	189
Total acreage of new pastures established	703
Number of old pastures renovated	73
Total acreage of old pastures renovated	180
Number of drainage systems planned and adopted	57
Number of acres drained—by ditch	6,113
Number of farmers induced to remove stumps	158
Number of acres from which stumps were removed	528
Number of farmers induced to terrace their sloping lands	176
Total acreage so terraced	908
Number of home gardens planted or improved	2,600
Number of road improving demonstrations assisted in	17
Number of miles of improved roads resulting therefrom	625
Number of farmers who planted cover crops to be turned under	1,019

Number of new implements and tools bought:

Binders	7	One-horse cultivators	120
Hay presses	4	Plows	259
Gas engines	7	Hay loaders	1
Two-horse cultivators	32	Hay rakes	40
Tractors	8	Cream separators	1
Motor trucks	15	Spraying machines	6
Corn planters	63	Manure spreaders	3
Mowers	47	Small tools	2,802
Grain drills	16		
Disk harrows	45	Total	3,476

Number of communities in which farm and farmstead improvements were conducted 49

MISCELLANEOUS EXTENSION WORK

Number of visits by agent to:

Demonstrators	6,828	
Coöperators	3,122	
Other farmers	2,955	
Business men	416	
Boys' and girls' club members	1,585	
		14,916

Number of miles traveled:

Railroad	15,080	
Team	5,759	
Automobile	80,191	
Otherwise	1,594	
		102,624

Calls on agent at office and home relative to work—personal	5,004
Calls on agent at office and home relative to work—telephone	904
Number of farmers' meetings held under auspices of agent or extension division	923
How many meetings of all kinds, including field meetings, did you take part in?	1,797
Total attendance at these meetings (approximate)	80,486
How many field meetings held by you?	389
Total attendance at these meetings	10,043
Number of days spent at office work	7,655
How divided:	
Correspondence	592
Conference	402
Miscellaneous	426
Number of days spent in field work	2,666
How divided:	
Supervising regular demonstrations	607
Other farm visits	441
At meetings	247
Assisted in short course work	23
Organization and marketing	45
Number of official individual letters written	6,885
Number of articles relating to your work prepared and published	113
Number of different circular letters prepared by you and sent out	99

Total number of copies of such letters	6,436
Number of bulletins or circulars of U. S. Department of Agriculture distributed	3,318
Number of bulletins or circulars from State College or State Department of Agriculture distributed	2,946
Number of visits to schools relating to work	484
In how many schools did you assist in outlining an agricultural course?	10
How many extension schools or short courses did you assist in?	1
Total attendance at these schools	16
Total number of days you were engaged in these schools	77
Number of farmers who attended short courses at colleges as a result of your effort	27
How many times have you been visited by specialists from college or the department?	42
Was there a county fair held in your county? Yes, 11.	
How many demonstrators, coöperators, and club members had exhibits?	453
How many of these won prizes?	347
How many demonstrations have you in truck or small fruit?	60
How many were successful from a financial standpoint?	51
How many farm account books distributed to farmers?	366
How many farmers in your county did you assist to keep cost production records?	346
How many farmers in your county are practicing fall plowing as a result of county agent's work?	1,130
How many wood lots have been improved at your suggestion?	65
How many farmers in your county have been influenced to grow sugar cane or sorghum for syrup?	1,236
How many farmers began keeping bees this year or improved their methods at your suggestion?	4
Number of hives involved in previous questions	10

List in following table work done in connection with seed improvement:

Crop	Improved Seed Secured		Improved Seed Offered for Sale	
	Farms	Bushels	Farms	Bushels
Corn				
Wheat				
Rye				
Cotton		Lbs.		Lbs.
Oats				
Potatoes				
Tobacco		Oz.		Oz.
Other				
Totals	551	8,736	17	3,295

SPECIAL REPORT BY WHITE AGENTS ON WORK WITH NEGRO FARMERS

Number of negro demonstrators (all crops)	60
Number of negro demonstrators reporting (all crops)	40
Total acreage of all crops grown under improved methods on negro demonstration farms	328

Number of negro coöperators (all crops)	94
Total acreage of all crops of negro coöperators	1,024
Number of negro farmers who planted pure or selected seed on their demonstrations	57
Number of negro farmers you have influenced to select seed for next year's crop	93
Estimated quantity of all seed selected by negro farmers (bushels)	479
Number of purebred animals bought by negro farmers at your suggestion:	
Dairy cattle	13
Hogs	72
Poultry	99
Number of negro farmers who have produced practically all their home food and feed due to your influence	76
Number of negro agricultural clubs or community organizations formed this year for the general improvement of rural conditions	5
Number of members	82

Farm and rural improvements made due to agent's influence:

New houses built	1	
New barns built	8	
New schools built	5	
New churches built	3	
New toilets built	32	
Buildings improved or repaired	33	
		82
Number of farm makers' clubs organized this year		2
Number of members in these clubs		23

Respectfully submitted,

C. R. HUDSON,
State Agent.

REPORT OF THE DIVISION OF HOME DEMONSTRATION WORK

To the Director:

Reports from the 53 counties organized for home economics work with rural women and girls give most satisfactory records of results accomplished. The programs included work in nutrition, the care, preparation, and preservation of food, clothing, household management, household furnishings, beautification of the farmstead, poultry work, dairy work, gardening, and recreation. No one county could compass all these projects, but subjects were selected and programs made for primary, secondary, and advanced work as per the plan the county councils and home agents worked out. In the same county work might be primary, intermediate, or advanced, and both subject-matter and methods would be modified to meet conditions.

Nutrition has been, and probably always will be, the most important project undertaken in every county. Poultry work, dairy work, and gardening are made to relate to nutrition, and these projects have been more successful because club members have realized the relationship. The county reports show that 7,093 girls and 6,738 women made a study of food values and the better preparation of food.

Statistics

Number of counties organized	53
Number of counties reporting	53
Number of women's clubs	544
Membership	9,350
Number of girls' clubs	544
Membership	9,350
Number of community clubs	172
Membership	7,819
Number of counties having county councils	35
Membership	1,967
Total number of club meetings held	8,916
Total attendance at meetings	211,930
Total number other meetings held	2,151
Total attendance	203,130
Grand total of meetings held	11,167
Grand total attendance at meetings	415,060
Number of homes visited	12,210
Number of schools visited	3,821
Number of counties reporting work in foods	42

	Girls	*Women*
Club members enrolled in food work	7,093	6,738
Demonstrations given in well planned meals	290	368
Demonstrations given in loaf bread and rolls	376	452
Demonstrations given in quick breads	670	332
Demonstrations given in meat cookery	83	224

	Girls	*Women*
Demonstrations given in vegetable cookery	115	315
Demonstrations given in milk cookery	296	157
Demonstrations given in use of fireless cooker	107	125
Demonstrations given in use of steam pressure cooker	129	133
Demonstrations given in making fireless cooker	92	74
Fireless cookers made	129	148
Club members using fireless cooker	209	630
Club members using steam pressure cooker	13	213
Club members using thermometer	21	449

County-wide campaigns teaching use and value of milk	11
City campaigns teaching use and value of milk	3
Counties where proper school lunches have been demonstrated	18
Counties where bread campaigns have been held	25
County campaigns for use of pressure cooker	5

Methods

Methods of instruction are: (1) through systematically planned lecture demonstrations given by the home agent, specialists, and by local demonstrators or leaders she has trained. These are given to women and girls at their club meetings, which are held fortnightly or monthly. (2) Through county-wide campaigns with or without the coöperation of farm agent, schools, county health officers, and welfare officer. (3) At community, county, and State fairs through demonstrations and educational exhibits. (4) Through circular letters, bulletins, papers, and periodicals.

Stories of Results

The Forsyth home agent says: "In one school where I was holding a club meeting I found a very pale little girl who looked as if she might have tuberculosis, and upon inquiry I found she had lost her mother from this disease. It happened that the lesson for the day was on soups and I demonstrated cream of tomato, and all the children, including this little girl, were delighted with it. On my way home I stopped to see her sister and told her to have the stove ready the day of my next meeting and I would go an hour earlier and stop and show her how to make other milk dishes that this child might get as much milk in her diet as possible. The sister told me later that the little brother said he wished he were bigger so he could hold more soup; and 'father thinks there is nothing like it.' The little girl has improved much, and is really drinking the whole milk every day now."

In December, 1921, the Rowan women and girls took up the study of foods. Each club and some of the individual members purchased copies of "Feeding the Family," by Mrs. Rose. At the club meetings in December, January, February, and March, the clubs discussed feeding the family from the youngest to the oldest.

The Brunswick home agent in her rounds in midsummer visited a home where she found a 6-year-old girl who had never walked. She was not surprised when she found that bacon, grits, cornbread, and

coffee was her principal diet. The agent talked over the situation with the parents and urged them to purchase a cow. The father promised that he would when they got the stock law. At a later visit the home agent said that she did not know the pretty little girl who met her and who was able to walk by holding on to the banister. The little baby boy was also a rosy-cheeked, healthy-looking fellow. The mother, replying to the remark of the home agent that the children must be drinking milk, said, "Yes, and I give you the praise for the cow."

In Greene County a woman told the agent that her heart quaked when she thought of what in the years past she had fed her children.

Better and more nourishing school lunches have been given special attention in 18 counties, and the women's and girls' clubs in the communities have heartily coöperated in helping to forward the project.

Anson County sends this report: "We held campaigns in the school communities last winter to promote the hot school lunch. Two of the schools where a great many children were brought in from rural sections on trucks put the hot lunch on for ten weeks. At Morven the Woman's Club bought an oil stove, pots, and serving pitcher for each room. The children furnished cups which were supplemented with cups and spoons secured by the home agent. The children brought milk from home or a small amount of money for cocoa, which was served four days in the week. Vegetable soup with rice was served on Wednesday. The high school girls were detailed in squads to prepare the lunch. The first week it was attempted the agent assisted in working out recipes and amounts. She also visited the schools during the period to note the success of the plan. At Lilesville the plan of the hot lunch was financed by the Woman's Club, supplemented with things brought from home. Each teacher, with the aid of the larger girls, prepared the hot soup for her own room. As the schoolroom stoves were flat on the top, this could be easily done. The children enjoyed it immensely and all the town children wanted to stay, too. In the summer 250 quarts of soup mixture and tomatoes were canned by mothers and donated for winter lunches."

In Halifax County the agent who undertook home demonstration work the first of June has this to say: "Soon after I came to the county the rural supervisor said she would like for me to talk before the county teachers conference on 'School Lunches.' I was very glad, for it gave me an opportunity to meet the teachers, besides getting this question before them. I made definite plans for the talk, putting special emphasis on the serving of one hot dish at the noon hour. I outlined a plan by which such a program would be possible, and also how necessary supplies and utensils might be obtained.

"In two of the schools the girls are doing the work under the supervision of the teacher, and they have the work so divided that it takes only two or three at a time from classes. When the girls are on duty they plan the menus and see that the supplies are on hand.

"In one community a woman gives all the milk needed and some of it is sold for three cents a glass. This money is used to buy other supplies. A very small sum is charged for the lunch, only enough to make expenses.

"In another place the children bring a great many of the supplies from home, such as potatoes, canned tomatoes, milk, eggs, and other things, and no charge for the hot dish is made.

"I have not, however, let the hot lunch receive all the attention. I have talked almost as much about the cold lunch brought from home and one teacher said there had been a wonderful change in the kind of food being put in the lunch boxes of the children. Several of the women's clubs have asked me to demonstrate the cold lunch and method of packing to them before school started, and this is one demonstration that every one seemed to enjoy. In most of these places I gave them printed copies of menus to be used in the lunch box, and in these menus I tried to put things which I knew were to be had in the majority of country homes.

"The teachers realize the importance and value of the nourishing lunch, and have been willing to coöperate in any way that they possibly could to make the scheme a success."

The home agent in Beaufort County, in coöperation with the county agent, put on a "Live-at-Home Campaign." The importance of the family cow was first stressed. The farm agent talked on permanent pastures and the home agent on the value of milk in the diet. Sixteen community meetings were held where they talked to the parents. One old fellow was heard to say, "Well, I guess she was right, and I will have to get a cow for the children." The next phase of the campaign undertaken was the garden work. The home agent talked about the importance of vegetables in the diet and tried to interest the people in a year-round garden. Government seed were distributed.

In coöperation with the county nurse and the home demonstration club women of the communities, the home agent is trying to impress upon children and mothers the necessity of proper feeding. This they do by measuring and weighing rural school children, noting results, and finding out just what are their food habits. Remedial diets are suggested and the value of milk and vegetables stressed.

In Wayne County the home demonstration agent prescribed a wholesome diet for certain underweight children whose interest developed after the weighing and measuring by the county nurse. This was done in seven schools where scales were installed.

In New Hanover County the home agent and county nurse weighed 728 children in 12 rural schools. Of this number 176 were up to normal, while 552 were under or overweight. Talks on food with the use of food charts corrected many of the bad eating habits among the children, and with the consumption of more milk has brought them up to normal weight.

In the three "Milk for Health" campaigns which were put on by the Division of Home Demonstration Work and the Division of Animal Industry coöperating, the assistant State home demonstration agent relates the following: "In 1922 the Division of Home Demonstration Work, in coöperation with the Division of Animal Industry, put on milk for health campaigns in three cities: High Point, Greensboro, and Raleigh. In High Point over 3,000 children were reached; in Greensboro and vicinity 6,848 children and something like 3,000 adults; and in Raleigh 3,500 school children heard the lectures and saw the demonstrations. A survey which was made as a part of the 'Milk for Health' weeks in the three North Carolina cities shows the following:

	Greensboro	*High Point*	*Raleigh*
Drinking tea or coffee	36.7 per cent	42 per cent	49 per cent
Not drinking milk	22 per cent	13 per cent	20 per cent
Drinking milk regularly	56 per cent	60 per cent	51.9 per cent

"In Greensboro we found that work had already been done in weighing and measuring the school children at the beginning of the school year. A certain per cent of both white and colored children were found underweight. Continuing along this line at the close of the active part of the campaign, we put on a feeding experiment. Twenty children, all of them at least six pounds under weight, and one as much as 25 pounds, were selected and given one pint of milk per day for eight weeks. They were weighed and checked every two weeks. At the end of the experiment period we found an average gain of 3.73 pounds—which does not show all the results by any means, as each teacher reported improved physical condition and more mental alertness. The poster contest was a part of each city campaign. Prizes were offered for the best milk poster from the primary, intermediate, and high schools, and much interest was aroused in this way. The publicity given in these campaigns was all that could be desired. Both the morning and afternoon papers carried articles for which we provided the material, and some of the stores inserted lines about the value of milk in their regular advertisements.

"The financial side of the campaign was looked after by the chamber of commerce coöperating with local organizations and individuals. Since I had been delegated to look after this work, I went, in each case, to the town one week before the actual campaign. The time was spent in getting the coöperation of the mayor, board of health, city school superintendent, chamber of commerce or board of trade, medical association, Woman's Club, parent-teachers association, and any nurses or hospital officials in the town. During this week a member of the Animal Industry Division came in and looked after the local dairy situation. Following this preliminary work, Mrs. McKimmon sent out four additional demonstration agents for the week of the campaign. These agents with myself followed a schedule by which we spoke to every child of

school age, both white and colored, in the town, and to adults in clubs, factories, mills, and laundries."

Nutrition work was carried on in coöperation with the Division of Animal Industry at the State livestock meeting at Elizabeth City. Here, with the help of the local home agents, a demonstration was given on each of three days. These showed three balanced meals for children of different ages, stressing the use of milk and milk products. A demonstration on weighing and measuring was also given for the school children.

Bread Campaigns

Campaigns for better bread in every rural home have been carried on in 25 counties in 1922.

The plans for a better bread campaign for Davidson County were all made in October, just after the fair season closed. First, the coöperation of the county commissioners was asked. They agreed to finance the campaign in two ways: to pay for all printed matter, and to finance all demonstrations. A very good list of prizes was secured, the four grand prizes being trips to the State short course for girls and two trips to the 1922 State Fair, both held at Raleigh, N. C. Two business men and the four banks of the county gave these trips.

The agent says: "After getting my material together an itinerary was made out for November, December, and January, which included one demonstration in each school of the county, 72 in all. Extra time was taken for second visits to many of the schools. In 69 of the 72 schools the agent made and baked the biscuit with the pupils, following the directions which had been given them at the beginning of the meeting. After the demonstration each girl was given an enrollment card, which she was to carry home with her, ask her mother if she should enroll and return it to the teacher next day, who sent them to the office. This was done for three reasons: to eliminate the joiners by 'lifting the hand,' who usually stop at that; to attract the attention of the mother; and, also, to make the teacher feel that she had a part in the contest, which she surely did.

"While the biscuits were baking I always had the girls present to give me their names, addresses, and ages on a slip of paper, whether they intended to join or not. This gave me a good record of the girls over the county. Then, upon returning to the office each night a circular letter was sent out to each girl impressing them with the idea of joining the contest. This was carried out after each visit. When the enrollment cards were received from the schools a record book was sent to each member, in which she was required to write down the results of her bread baking for at least six times. It was interesting to read the records of these little girls. Some would say, 'Mother says my bread is better than hers.' Others would tell why their biscuits were not good, the stove was too hot, or the baking powder was not good. During the

entire time I emphasized the importance of a good leavening agency. More than 300 mothers changed their brand of baking powder, using a better powder in every instance.

"At the close of the contest at Lexington, although it was the coldest day of the year, more than 500 people were present. The courthouse was filled. Many fathers and mothers were there. The program for the day included an address from the State home demonstration agent and an inspirational talk on club work by the club leader of the State. Five hundred and fifty-nine girls enrolled in the contest, and carried on the project as was directed. Many girls and women used the recipes who did not join. Two thousand five hundred recipes for making bread were given out. Two hundred and 17 brought biscuits to the county contest, and 65 schools held the try-out contests. More than 1,500 people were reached, and the first and second prize winners of the county entered the State biscuit baking contest, where one won the first prize and the other won fourth."

Fifty-eight demonstrations in making biscuits were given in Bladen County and 41 in Cumberland, 500 girls and boys in each county being enrolled in the contest. After the demonstration is given at the schoolhouse, a township contest is held, and then the winners are brought to the county-seat and the winner has a chance to enter the State contest at the State Fair.

The following is the report of the Durham County bread campaign: "The first of April we began our bread campaign; rolls for the women and biscuits for the girls. I have given 20 demonstrations of each, reaching all county schools but three. This campaign for better breads was the second one held in the county. A member of the board of commissioners who was present at the December meeting of the county council when plans for 1922 were being discussed asked that another campaign be put on, as he felt that the first county-wide instructions for better bread was worth more to the county than all the money it ever put into demonstration work."

The following comes from Rockingham County: "The subjects taken up in foods this year have been biscuit campaign for girls, yeast breads with women, school lunches with women's clubs, balanced meals with women and girls, steam-pressure cookery of meats and vegetables, fireless cookery of meats and vegetables, cake baking, cooked and uncooked icing, candy making, and table service.

"The things that the women have liked most were cooking with the labor-saving fireless and pressure cookers, balanced meals, and cake decoration.

"The girls have been most interested in biscuit work, candy making, and table service. At the fairs this fall could be seen results of each of these lines of work. Better bread on display; hence better bread in the home. One girl wrote in her record of work in the biscuit campaign,

'My very first biscuits were better than those we usually have. Papa said they were the best he had ever eaten.' "

Conservation of Food Statistics

Number counties reporting conservation of foods	46
Number demonstrations in canning for girls and women	11,044
Number quarts vegetables and fruits in tin and glass	1,324,096
Total value vegetables and fruits in tin and glass	$168,785
Number quarts fruits and vegetables sold	60,666
Value fruits and vegetables sold	$15,166
Number quarts preserves, jams, marmalades, etc.	82,010
Value preserves, jams, marmalades, etc.	$80,000
Number pints jelly	99,151
Value of jelly	$49,575
Number quarts of sweet products	5,921
Number quarts fruit juices made	6,894
Number quarts vinegar made	53,293
Number quarts catsup made	8,863
Number quarts pickles and relishes	73,397
Value of vinegar, catsup, pickles, etc.	$55,047
Number pounds canned meat, poultry, and fish	6,664
Value canned meat, poultry, and fish	$3,332
Total number containers filled	1,720,905
Total value	$371,905

Canning fruits, vegetables, and meats, and the making of jelly, jams, preserves, and pickles have been taught in 46 counties.

The advent of the boll weevil and hard times generally have given an added impetus to the saving of food for the family table and for the market.

Many a pantry that formerly held commercially canned products is now well stocked with home-grown and home-canned fruits and vegetables.

The Scotland County home agent says: "The first work I did in Scotland County after returning from the annual agents' conference in Raleigh in June was to prepare and hold a two-day canning school in the new office which was just ready for use.

"I held the school in order that I might teach as many of the women in the different sections of the county as possible, and they could go home and give the demonstrations in their communities. I chose leaders to do the work under my directions. In this way I was able to have more things canned than would have been possible otherwise. We canned in glass and tin. I was fortunate at this time to have the man who demonstrated the Burpee Sealer in town, and he showed the women how to seal cans.

"At the two demonstrations there were 50 women and one man. There would have been more had not a terrible storm broke at meeting time. During the lessons 87 bulletins on canning and jelly making were given out."

The Beaufort County agent says: "This was a good canning year, as there was an abundance of fruits, and our promotion of gardening in Beaufort gave the housewives an opportunity to can more vegetables than ever before; $8,876 worth of fruits and vegetables were conserved."

To arouse interest in girls' club work, and to create a teaching force for next year, the Mecklenburg home agent organized a class of girls which represented the entire county. Twenty-six members were enrolled from eleven different townships. She says, "During July and August these girls met each Saturday morning in my small laboratory, where they were taught to can fruits, vegetables, jelly stock, and fruit juices. They also made pickles and jelly. This class sent a special exhibit of jellies and fruit juices to the State Fair at Raleigh in October, winning first county prize on the exhibit and every blue ribbon on the six different classes of jelly."

The central district agent, who is also the food specialist, has the following to say of her pupils at the girls' annual short court: "I gave a lecture and made jelly from orange pectin and muscadine jelly stock. The girls were very much interested in the crystals of cream of tartar found in the jar of stock, and in how to get rid of them. Many of them went home to give demonstrations to groups of both women and girls."

The farm agent of Bladen said of Katharine Clark: "She gave as interesting and effective a demonstration at the encampment of how to make good jelly as any trained agent could have given."

The food specialist says: "I have furnished several commercial concerns with data concerning the manufacture of grape and apple products, and have helped them to get in touch with the manufacturers of equipment. I have especially enjoyed this work, as Mrs. McKimmon and I have been so interested in experimental work with grapes and apples for a number of years, and I feel that our work is bringing results when we are able to actually help these concerns. It shows, too, that the work we have been doing with our women along this line is attracting attention in the commercial world. When we found that there was a profit of $5 in a bushel of grapes if the farm woman manufactured it into jelly in her own kitchen, after allowing $2 for the grapes, the news spread and calls have poured in for information and assistance."

CURED MEAT

Statistics for the State

Number pounds corned beef	1,025
Number pounds pork cured	1,536,164
Number pounds sausage made	330,076
Number pounds lard made	169,841
Number pounds head cheese, scrapple pork loaf, or other pork products made under agent's direction	18,173
Total value of cured meats, lard, and by-products	$616,583.70

Durham, Cumberland, and Johnston counties have done excellent work in the canning of meats and in inducing club members to buy pressure canners.

The Johnston County agent says that the people who cured meat with the help of the home demonstration agent last year are passing the methods on. Interest in canning meat is growing. One housewife canned 97 quarts of beef, while a community has ordered a steam-pressure canner to take care of the "hog killing." The story of two Johnston County college boys (Elmore and Cronje Earp) is interesting. These two boys are at Wake Forest College, and are doing light housekeeping. They do their own cooking and all last summer they were busy putting up their "eats" to carry back with them. Elmore is a junior, while his younger brother is a freshman. Miss Minnie Lee Garrison, the county home demonstration agent, taught them to can, and they put up the following: 200 cans of peaches, 25 cans of apples, 10 cans of pears, sweet pickle peaches, cucumber pickles, pear preserves, grape preserves, 100 glasses of jelly, canned tomatoes, canned beans, canned peas, 15 dozen eggs preserved. They also had 21 cans of chicken and beef. They get sweet potatoes and Irish potatoes occasionally from home, and they get their butter through the mail from home.

POULTRY

Number counties doing poultry work	24

Chickens

	Girls	*Women*
Total number demonstrators	792	3,126
Number demonstrators purchasing standard-bred eggs	482	1,811
Number dozen standard eggs purchased	811	3,851
Number demonstrators using incubators	9	425
Number demonstrators purchasing standard baby chicks	11	303
Number demonstrators using brooders	14	461
Number demonstrators purchasing standard-bred breeding stock	22	421
Number demonstrators using standard-bred males to improve stock	25	1,387
Number standard-bred chickens purchased	316	5,590
Number poultry houses built	36	557
Number poultry houses remodeled	42	371
Number demonstrators raising feed for flock	332	1,919
Number flocks culled	102	945
Total number in flocks	8,153	95,890
Total egg production	30,238	394,877
Number dozen eggs sold	3,354	141,927
Number of egg circles organized		2
Number dozen eggs used for hatching	1,101	55,606
Number breeders' associations		20
Number dozen eggs used at home	9,003	138,303
Number dozen eggs preserved in water glass	15	1,389
Number standard-bred eggs sold for hatching purposes	366	9,039
Total number standard-bred chickens raised	2,727	89,955
Number standard-bred chickens sold for breeding purposes	96	2,868

Turkeys, Ducks

	Girls	*Women*
Number of demonstrators	2	101
Number of turkeys raised	8	1,782
Number of turkeys sold		1,405
Number dozen eggs sold	8	6
Total value, girls, $57; women, $8,062.20.		
Number of ducks raised	15	90
Number of ducks sold	10	40
Number dozen eggs sold	6	37
Total value, girls, $33; women, $203.80.		

Equipment Made

	Girls	*Women*
Number of self-feeders	86	625
Number of water fountains	205	874
Number of candling lamps	7	46
Number of egg carriers		1,207
Number of other equipment	28	1,078

With the total value of all poultry and poultry products produced by club members reaching something over $444,261, the importance of emphasizing this project with women and girls is manifest.

The Brunswick County home agent says: "Three years ago there was scarcely a flock of purebred poultry in the county, and now there are numbers started." One woman who has a flock of White Leghorns, has built up quite a trade purchasing poultry enroute to town, and by milk-feeding them is able to make them put on three-fourths pound per week and sell them at a profit. The poultry work was emphasized by two campaigns put on jointly by the home and farm agents, one in selection and care, and the other in making coops, culling, and feeding.

Robeson County organized two poultry associations during the year.

The New Hanover County agent says: "Poultry work has a definite place in the county program. Out of 800 chicks hatched by one person, 75 died, 150 were sold at 20 cents each for baby chicks, 85 were kept for stock, and 390 were sold for fryers at 50 cents per pound. These weighed 5 pounds at five months. Another person has 500 White Leghorns, having started in the business with baby chicks, while a thousand-hen capacity poultry house has been erected for a third person under the direction of the State poultry agent."

Many results of the poultry work will be found under markets, where poultry and poultry products were sold.

THE HOME DAIRY

	Number	*Value*
Counties reporting dairy work	24	
Demonstrators enrolled	2,323	
Milk cows kept by demonstrators and club members	9,090	
Milk cows purchased through agent's influence	157	

	Number	*Value*
Demonstrators improving stock through agents' influence	100	
Demonstrators making butter	2,361	
Pounds reported made	514,462	$180,061.70
Pounds reported sold	63,836	22,342.60
Pounds cottage cheese made	2,379	
Pounds sold	855	213.75
Gallons of cream sold	5,900	
Gallons sweet milk and buttermilk sold	243,225	
Demonstrators using more milk and milk products in the family diet	3,853	

Equipment Made or Purchased

Sanitary milking pails	232	Paddles	359
Dairy thermometers	94	Shotgun cans	36
Butter workers	12	Barrel churns	125
Iceless refrigerators	33	Separators	100
Coolers	113	Molds	571
Brushes	173	Cheese presses	7

The report of dairy work is a report of what has been done with the family cow, and what the family has done in the way of using milk, butter, and cheese in its diet.

The "Use More Milk" campaigns in towns and country which have been described under nutrition have been potent factors in increasing milk production and consumption, and the coöperation of the Division of Animal Industry has been of the finest.

The following are interesting items:

In Bladen three community meetings were held jointly with the farm agent when the milk separator was demonstrated; 175 attended.

In Cumberland a four-day agricultural chautauqua was held in cooperation with the farm agent at four different points; 705 attended. Care of milk in the home was studied by 10 women's clubs.

In Johnston a milk campaign for one week reached 791 people, and the milk fairy play reached 1,795 people.

In Robeson four home dairy meetings were held jointly with the farm agent; 250 attended.

In Sampson five dairy schools were held jointly with the farm agent when the separator was demonstrated and the interest created brought about a local sale for cream; 184 attended.

New Hanover reports 300 cows purchased as a result of the "Milk for Health" campaign, at which time the dairy specialist assisted. Cumberland County was pleased that the dairy specialist on judging the 12 pounds of butter at the county fair remarked, "This is the best lot of butter I have judged at any fair in North Carolina this fall." The agent felt that the curb market helped to improve the quality of butter after the instruction was given at the club meetings following the series of meetings which were held for one week in March, the specialist assisting.

GARDENS

Number summer vegetable gardens	19,028
Number fall and winter vegetable gardens	9,318
Total yield of fresh vegetables in pounds	17,005,519
Number fresh vegetables used in home	4,869,888
Value fresh vegetables sold	$249,345.68
Number hot beds	1,128
Number cold frames	903

FRUITS

Number of demonstrators	2,755
Total yield in pounds	11,017,668
Value fruits used at home	$97,584.50
Value of fruits sold	$98,241.70
Number fruit trees planted this year	33,974
Number vines and small fruits planted this year	40,725

The "Live-at-Home" campaign was carried on in 47 counties in the State, and did much to revive interest in gardening and in poultry and dairy work.

Club leaders were made chairmen of garden committees. The people pledged themselves to plant larger and better gardens, first to feed themselves and then to sell the surplus.

Miss Gaither put on the garden campaign in coöperation with the county agent. There were 241,240 pounds used at home and $589.50 of fresh vegetables sold.

The Halifax home agent says: "As a result of the garden work we did in this county, there were 260 new summer gardens, 100 new winter gardens, and $5,011 worth of vegetables sold. This, of course, included products from the gardens of those who had been growers before this year also."

The following results are from Pasquotank: As a result of this garden work, 350 summer gardens were planted and 350 fall and winter gardens started, 200 hot-beds made, and 100 cold-frames. Vegetables were sold amounting to $2,667.

In Perquimans County the home agent promoted the garden work, and no better evidence of the value of this work can be shown than by the fact that one woman exhibited 21 varieties of vegetables growing in her garden in November.

The Mecklenburg agent says: "The Governor's 'Live-at-Home' campaign has meant a great deal to the farm homes of Mecklenburg County. Our people had the reputation already of living at home, but when an inventory of the gardens was taken it was surprising to find how few vegetables were grown in the average garden and how few people have winter gardens. Since this campaign was put on one hundred milk cows have been brought into the county, and gardens have increased 20 per cent. I do not have statistics of poultry. We got started too late in the spring to do much."

The Transylvania home agent says: "The gardening campaign is the only campaign the farm agent and I put on this year. In the spring when the Governor called upon us to assist in the 'Live-at-Home' campaign, the county agent and I organized a campaign in gardening. We had a meeting of the county superintendent, editor, ministers, and others interested and put notices in papers. The county paper offered $25 in prizes to the school children for articles on the value of gardens and home-grown produce, and we invited all schools to compete for the prizes. We also distributed seed and enlisted members in the garden contest. One hundred families were represented, pledging themselves to plant six more vegetables and to exhibit some at the community fair nearest them. A judging committee was appointed and prizes offered for the best garden in each township. The round-off came in with the fairs. Many vegetables were planted that people had thought would not thrive in the mountains. I gave demonstrations in preparation and serving of vegetables. The live-at-home program was stressed in all its phases—gardens, the family cow, poultry, and hogs, and we later took up these subjects in each organized club."

The Brunswick County agent was pleased to see the splendid garden display of vegetables at their fair in November, and said one man realized $400 from the sale of his fall tomatoes.

"So many more are planting than ever before, vegetables are much more common on the tables, and there are so many fall gardens that I feel like much more was accomplished by the 'Live-at-Home' campaign," he says.

In the gardening campaign the home and farm agents were assisted by a garden specialist and the meetings were held by townships rather than communities.

Miss Albertson, home agent in Pasquotank, reports her two campaigns as follows: "Last fall our farm agent, the public welfare office, and I coöperated in a garden campaign. Circular letters were sent out, and a large gathering of representative men and women of the county and town met in the chamber of commerce rest room to discuss plans for this campaign. A publicity committee was appointed and committees to hunt up vacant lots and interest people in cultivating gardens. The welfare officer and I canvassed the mill district and interested families in backyard gardens. The mills gave a number of vacant lots rent-free to their employees, who availed themselves of this opportunity, and quantities of vegetables were raised. Vegetable seeds were sent us by our Congressman, Mr. Ward. These we distributed through county and town. A number of children had patches of vegetables in their backyards, and everybody seemed to have the garden spirit. In the home demonstration clubs a discussion of gardens was held, and roll-call was answered by giving the names of the vegetables each was planting. As a result, much more interest is shown in fall and winter gardens."

MARKETS

	Number	*Value*
Markets established for club products:		
Curb	7	
Stall	2	
Demonstrations given in standardizing products for market:		
Agent	172	
Specialist	37	
Club members selling products through markets	1,325	
Dressed poultry products sold through markets	4,531	$5,664.00
Live poultry sold through markets	5,822	5,822.00
Dozen eggs sold through markets	5,345	2,672.00
Pounds butter sold through markets	1,597	638.80
Cans fruit sold through markets	1,420	355.00
Cans vegetables sold through markets	5,376	1,055.00
Quarts preserves, jelly, etc., sold through markets	578	578.00
Quarts pickles sold through markets	203	101.00
Value of flowers sold through markets		195.00
Miscellaneous		315.00
Club members selling through parcels post	82	
Name products thus sold, quantity, and value: butter, eggs, chickens, turkeys, canned goods, etc.		17,395.80
Number selling to merchants	338	
Quantity sold	5,430	3,271.50
Number selling direct to consumer	1,622	

With farm women all over the State asking for help in marketing the surplus products of their gardens, poultry yards, and dairies, the home demonstration agent has been called upon for methods of getting these things before the public in salable form. To that end curb and stall markets were launched in nine counties last spring and summer, and have now been in operation long enough to serve as demonstrations of what may be done by getting together.

Where success follows the market venture, very definite plans have been outlined for its conduct. The council of farm women composed of representatives from the home demonstration clubs of the county meets to determine first if a market is really needed. Next, it finds out if products can be had in sufficient quantity to meet daily or weekly demands, and further, just what communities can be looked to for a steady supply. There is the big question of grading and standardization, also.

The Division of Markets has helped the farm women by sending out its specialists to teach them how to make standard and salable packs of their products, and has advised, also, regarding the equipment necessary for markets. Their specialists have been present at and before the opening of a market, helping to arrange an attractive booth and making suggestions of good business methods for conducting the business.

The Curb Market

If it is decided that a curb market might meet the need of both the producer and the consumer, a committee from the council visits the city fathers seeking to secure a parking space on a good street, and when this is assigned each home demonstration club becomes responsible for definite supplies on definite days.

The council decides how many days per week the market shall operate in the beginning and the amount of patronage and the steady flow of eggs, poultry, butter, vegetables, canned goods, and other produce are the deciding factors afterwards.

The extreme cold of winter days shortens the life of the curb market in most sections to six or eight months.

The need of better marketing facilities for farm home products was discussed in Greensboro last March and a movement for a curb market was launched by the united efforts of the farm and home agents, the county federation of rural women's clubs, the chamber of commerce, and the Woman's Club of the town.

The country producers were promised the coöperation of the city folks and the market was opened May 15. Tuesdays and Thursdays there is an average of 35 cars selling products and on Saturdays 100 cars.

One family sends its produce by a 12-year-old boy, Tom Pemberton, and he usually sells about $20 worth before 10:30. He brings butter packed in ice, the butter properly molded in brick shape, and fruits and vegetables.

To stimulate interest, special feature days were inaugurated. One day blackberries would be offered at 10 cents or 8⅓ cents if bought in quantity, and demonstrations of how to make them into jelly were carried on at the warehouse in front of which the market was located.

The Lumberton curb market has grown to gratifying proportions. The home agent says: "We take it turn about for the sales. The St. Paul Club brings its club car filled with market products on one day, the Philadelphus on another, the Fairmont on a third, and so on. With this arrangement we have products of each kind each market day, including cakes.

"We have two poultry associations in the county, and these have a sale every market day. We can thus supply the town with fresh eggs and chickens of the best quality.

"On Saturday, November 18, the Philadelphus home demonstration club brought in twenty home-made cakes, eggs, butter, vegetables, and nuts; the Rowland car brought twenty dressed hens, from seventy-five to a hundred broilers, and twenty pounds of butter. One club member brought twenty pounds of excellent home-made mincemeat, another lettuce and celery home-grown, and a third the best parts of a hog made up into sausage, and liver pudding."

The Cumberland County counsel of farm women organized the Fayetteville curb market, and Miss Talbot, president of the Riverside club, tells the following story of the success of the venture:

"We did not know exactly what to take to Fayetteville to sell on our first day of the curb market, but I loaded up my car with cabbage, turnips, potatoes, buttermilk, butter, eggs, and chickens, and when I got to town displayed them as attractively as possible in my car. One of my neighbors whom I called for on my way to town said she had nothing but one dressed hen to bring. I persuaded her to take it and we drove into town and backed the car up to the curb. All around us were other cars, and it wasn't long before the street was filled with cars and housewives were crowding around to purchase. There have been as many as 45 cars whose occupants were selling at one time.

"A fair price committee was appointed by our county council of rural women, one member from the council and the other from the city buyers. The prices for commodities agreed upon are posted on the cars and everybody abides by the ruling of the committee. We were all literally cleaned out on the first day of the market and my friend who brought the dressed hen had an order for 12 for the next market day. These days come twice a week, but our customers are demanding that we make it three. The hours are from 8:30 to 11:30 in the morning. We producers are learning what the consumers demand, and from the way they are taking our offerings, we believe they are satisfied. I was late one morning getting in and found every space on the curb filled; turning my car, I started round the corner, but was halted in the turning by customers who blocked the traffic until they seized my products and later followed me to pay for them.

"I take in from $12.50 to $19 each market day, and feel amply repaid for any work I may have done in helping to put the curb market on its feet. The market came out of the need of the country woman for a place to which she could bring her products for sale. She has neither the time nor the inclination to peddle them around the town. The county home demonstration council talked the matter over, called in some town women with whom it conferred, and after getting the consent of the city officials for the use of the curb, started business. It was not only the members of the home demonstration clubs of the county, but any farmers interested who were asked to bring their products for sale.

"Success has been beyond our most sanguine hopes, and we are now wondering how we can arrange and where we can go when the cold, bad winter weather comes."

A Stall in the City Market

Renting a stall in the city market is a more ambitious proceeding, and the organization that runs it needs to carefully plan. There is the matter of stall rent, cost of scales, show cases, ice for refrigerator, and other items, and the salary of a good person to act as salesman.

The Durham and Raleigh home demonstration markets have solved the expense question by taking an agreed upon per cent of all sales for defrayment and permitting those only who agree to abide by regulations to sell through the organization.

The responsibility for operating the market and supplying products rests upon the county council of rural women, and frequent are the consultations with the home agent and the marketing specialists.

Durham County Market

Early in June a stall in the city market of Durham was opened with a county club woman in charge. Every woman's home demonstration club in the county sent produce, and so far these women have been pleased with their sales.

Miss Rowe, home agent, was sent by the council to visit the State horticulturist and the marketing specialist in the Department of Agriculture in Raleigh and obtained valuable data for standardizing products. She also visited the markets in Richmond to study arrangement and prices before opening the stall. The manager of the stall, herself a rural club woman, accompanied her on both of these trips. Miss Rowe says:

"I do feel that the establishing of this market has been our greatest work for the past year. At this time some families are depending on proceeds from this market to help supply the actual family needs. Not only has it aided in the family income, but I consider the educational value worth much more than the dollars and cents. It is easy to notice the decided improvement in the grading of vegetables brought to market. The making and putting up of butter, the grading of eggs, and other produce is carefully done. At the opening, butter with strong flavor and which was full of milk could easily be found, but not so now. I also feel that it is not an exaggeration to say that the cakes as a whole are 50 per cent better. Our beautifully dressed plump chickens will always sell. It means that our people are careful in keeping up the standard."

Anson County

The Anson County club women have established a very good market for all the canned products with the local grocerymen of the county. It has been a gradual growth from supplying a few dozen cans to each man, to try to receiving orders at this date for practically all the surplus home-canned products in the county. The home agent says:

"I had first to instruct the women in the standardization of a commercial pack and in business methods of disposing of these products. Second, there was the problem of convincing the merchant that we had a good, reliable article, and lastly, we had to appeal to the local people to call for and use the home products.

"We did the advertising through public canning demonstrations, through appeals at club meetings, through presenting some of the best housewives with sample cans, soliciting their approval and asking that

they speak a good word here and there; and also by guaranteeing every can. Much boosting was also done through the county paper. At this date the merchants give us fine orders, some of them do not buy any other brands as long as the 4-H brand can be had. They call us over phone when their supply is getting low. We still have on hand enough canned vegetables to keep our merchants supplied through March and April.

"We make a plan to visit each merchant at least once a month, looking after the supply and asking for any complaints. Since September 1, 1922, we have sold to our local merchants 270 dozen cans of soup mixture, beans, and tomatoes. The prices are $2.75 for beans and $1.80 to $2 for tomatoes. We do not allow the club members to sell to a housewife at the same price she sells to a merchant. We also ask the merchant to make a display of the 4-H brand goods in his window as it comes on the market each year, and we frequently supply fancy packs for this display.

"The home demonstration agent has always believed that the best and only way to induce the farmer's family to produce more gardens, poultry, and milk is to help him dispose of the surplus and to that end we have devoted a great deal of time. A visit was made five years ago to one of our State colleges for the purpose of learning just what products they bought in large quantities. The steward was very obliging, carrying us through his storage plant and showing us how the vegetables, fruits, and jams were packed, labeled, and crated. He opened some of the varieties that we might judge the quality, and gave us prices and all other information asked for. We told the women of our clubs about it on our return, and suggested that Anson County could as well supply the college's need as a commercial concern. They were enthusiastic over the idea, and I secured a trial order for vegetables and jams. The result was so satisfactory that we have continued supplying the college with certain products each year since. On November 5, 1922, 848 pounds of blackberry jam was shipped to this institution. We also sold to the Greensboro College 108 pounds.

"A year ago we asked about the poultry supply at the college. At that time hens were selling in Wadesboro at 12½ cents to 15 cents per pound. We were told that the college used 300 pounds per week and would pay us 25 cents per pound plus express. Our club women immediately organized an association and they shipped coöperatively a barrel of hens every Friday for two and one-half months, which brought in checks amounting to $517. During the month of November we have shipped 1,044 pounds of dressed turkey to the college at 40 cents per pound. We also shipped 193 pounds of turkey to the Greensboro College for Thanksgiving and 200 pounds to Pinehurst.

"Parcel post: For three years the club women have been shipping dressed poultry by parcel post. This has grown steadily and the women now have regular customers who order from them as soon as the weather

permits shipping. There are 40 members enrolled in the poultry association who ship by parcel post and 18 members who ship live poultry to Washington, D. C. Fig preserves, pickles, and jellies are sold to outside customers by parcel post."

ARTS AND CRAFTS

	Value	*Girls*	*Women*
Club members enrolled in this project		3,050	3,138
Rugs made	$4,056.00	98	1,254
Counterpanes made	16,562.00	8	1,266
Brooms made	492.50		985
Chairs bottomed	140.50	16	180
Baskets made	11,794.00	4,228	3,635
Pieces furniture made		59	588
Pieces furniture done over		425	2,422
Other things		619	544
How many demonstrations were successful in dyeing?		40	1,267

Some Stories of How Farm Women Are Trying to Beat the Boll Weevil by Adding to the Family Income

The agents in the eastern part of the State, because of the advent of the boll weevil, have felt it necessary to lay emphasis on income-earning features for the housewife, and many are the stories of what has been accomplished along this line.

The story of Mrs. Peele, a club woman from Wayne county, is interesting: "I live ten miles from town and have been a home demonstration club member for several years. After the arrival of the boll weevil we heard so much about hard times that we almost decided to go to town, but we love the country life and wish to raise our four children to sturdy manhood and womanhood on the farm. We talked it over and decided to stick to the country and try our luck with small fruits, a good home orchard, a garden, and chickens.

"I have always been able to dispose of my surplus canned products at a good profit; therefore, I planted more tomatoes, corn, and okra for soup mixture, as this is a top-notch seller. We bought necessary pruning knives and spray material and gave our young orchard a good pruning and spraying. The trees for this orchard were purchased with premium money I won when I first began to can. I bought a pressure cooker, sanitary cans, and a sealer, and told my oldest daughter, 14 years of age, and her sister, eleven, that they could have what they could make helping me can. My boy of eight was paid as general helper. The oldest girl also had a share in the poultry. As a result, the girls and I won in premiums at the various fairs $194. I have sold $100 in one month of soup mixture, and had calls for 15 dozen more. Of jams, jellies, and pickles I sold $75 worth, and still have 344 quarts of 70 varieties for home use.

"We have screened our canning shed and storage room, which will make things easier by saving energy and time, and with the increase from the orchard and small fruit patch another year, we hope to still live on the farm in spite of the boll weevil."

Cumberland County reports a club woman as having won in premiums $176.73 from pantry exhibits at fairs, while 26 club women won premiums in some other department. In fact, the secretary of the county fair appeared before the county council and distributed checks amounting to $500.

One farmer and his wife won $400 in premiums at the State and county fairs, and, best of all, demonstrated to people how diversified farming could be done in his county.

The Greene County agent reports the happiness brought to a semi-invalid girl who was taught the art of making baskets and which she exhibits and sells through a local doctor's office.

A woman reports as much income derived from the sale of turkeys and pecans on the farm as anything else.

From Transylvania, a far mountain county, comes the following from the home agent: "I have engaged butter for many farm women with families in town and with Brevard Institute through the winter months. This institution will not take butter from any one until I have visited the home, approved the sanitary conditions, and shown them how to pack the butter. This strengthens my work greatly. We have about twenty orders on hand now for rag rugs for summer tourists, which will give my women employment for the long winter nights and help them make money for the necessities of life. One man in a mill village said: 'Miss Clarke, you are going to work my old lady to death. You got her so crazy on making up these rags you bring here. After she works hard all day she uses every spare minute dying the rags and sets up all night working them into rugs.'"

Forsyth County agent says: "One of our club women furnishes 12 families in the city with fresh fruits, vegetables, milk, butter, cream, and eggs. She tells me she sells to one customer as much as $60 worth some months, and averages $25 worth each month the year around. Another club member has four regular customers to whom she sells milk and vegetables. Another member furnishes all the brooms used by Salem College. This year she made 500 brooms at an average of 65 cents each. This woman has made and sold two dozen pairs of socks at 65 cents a pair."

CLOTHING

Number counties reporting clothing work	39
Number demonstrations in clothing work (total)	5,204
Number dresses made	25,129
Number dresses repaired	3,382
Number dresses remodeled	6,595
Number waists made	3,459
Number dress skirts	2,799
Number dress accessories	9,603
Number demonstrations given in dressmaking	1,650
Number demonstrations given in plain sewing	540
Number undergarments made	11,606
Number dress forms made	2,811
Number demonstrations in selection of clothing	445
Number demonstrations following dress design instructions in line, design, and color	1,929
Number demonstrations given in millinery	640
Number hats made	5,242
Number hats trimmed	3,109
Number hats refurbished	1,642
Number hats cleaned	1,276

Clothing work was reported in 39 counties, and dress design received particular attention. Both women's and girls' clubs decided on programs of work which gave them something of line, design, and color. Live models were most popular, and there were many volunteers from the rural audiences. The model was called to the front after the lecture

and the audience would help prescribe the correct lines for her particular type, the agent or specialist guiding the discussion and asking reasons. Color and design were discussed, and certain materials, hats, and dresses were used on the model to show the effect. From arranging the hair, selecting and wearing the right type of hat, to suggestions for the comfortable and appropriate shoe, the model was planned for. She was given what the women call a prescription of proper lines for her type and samples of the colors and shades most becoming were pinned thereon.

It is fascinating to see a plain woman with uncompromising hair, dreary clothing, and a depressed attitude develop into a pleased and attractive person simply by having her eyes opened to the right things to wear and the proper way of wearing them.

HOME AGENTS AT WORK AT STATE FAIR.
Part of demonstration made last year by Home Demonstration Division of Extension Service.

These methods of demonstrating dress design were used uniformly over the State, and that they are successful will be seen in the number of dress schools held, the 3,262 demonstrations given, and in the attendance. It is also noticeable in well dressed audiences of rural women and in the 130 club leaders who came to the girls' short course at Raleigh in June. I have never seen better or more tasteful dressing than these girls did. At the age when exaggerations were to be expected, they

delighted and surprised by their good taste and simplicity. From hair arrangement to low heel shoes, they showed the training they and their mothers had had in what to wear and how to wear it.

Clothing Schools

The clothing specialist says: "I held short schools on clothing, especially emphasizing dress design, in eleven counties since January first. These schools lasted from two to three, and sometimes four days. They usually covered lecture and demonstration on the following subjects: study of the human figure and checking up on proportion; use and alteration of commercial patterns; making the home-made dress form; line, design, and color. In those schools in which we had enough time, the actual cutting and fitting of a garment was given. In several other counties my work has been to outline and plan for the home agent that she may instruct her own women. With the help of one of the county home agents, outlines covering seven phases of clothing work were gotten out, thus assuring the counties uniformity of work for girls and women. At the schools instructions were given directly to 1,772 women and girls, and they in turn acted as local demonstrators or leaders and taught others. I do not consider the increased number of dresses the most important result of this instruction. One man expressed it rather well when he said to me, 'My wife has just made the best-looking dress—it's a jim-dandy—and the best part of it is that it *doesn't* look like it was made by loving hands at home.'"

The Bladen County agent made attractive posters advertising a two-day millinery and three-day clothing school. Every club was asked to send a representative, two if possible, one to assume the responsibility for promoting and encouraging the interest in the millinery work in her community, the other to do the same for clothing work. At the end of the first "millinery" day the supply of millinery equipment was exhausted, necessitating a trip at night to a nearby town, and the opening of a store in order that more material might be purchased. The school was attended by 200 women.

The Alamance home agent says: "In March the court room was converted into a workshop, and a week was given to home millinery, continuing the work done previously along this line. The women came in from town and county to make hats and to watch others make hats. To give millinery demonstrations in the county the home agent spends two days in each community and all-day meetings are held. At these meetings 425 hats were made. Fifty dress forms have been made in 15 clubs and at the county fair, and dress design has been given in 12 clubs."

In Anson County four township clothing schools were held, with 400 women attending.

Moore County reports that one little boy thanked the agent for teaching his sister how to make a dress form, as formerly he had to serve as

a model when sister was away at school and mother wished to make her a dress.

Rockingham County reports the following subjects discussed and demonstrated: importance of suitable clothes; test for textiles, colors, and lines suitable for different types of figures; economy in buying and making over clothes. Eighteen dress forms and 479 dresses were made by 58 girls and 240 women. A four-day millinery school was held and the women figured that they saved at least $550, as they made 110 hats.

The Franklin County agents reports as follows: "Millinery and clothing work has come to stay in Franklin County. It is impossible to hold a meeting of any kind without a request for help along this line. The popularity of the work is shown by the fact that 450 hats and 1,700 garments were made or remodeled, besides 500 dress accessories, at a total value of $4,300. At one club meeting a woman brought an old straw hat that was utterly hopeless. When I told her that it was impossible to do anything with it she said, 'Well, that means for me to stay at home all summer, for I can't buy one.' I told her to put the crown over a bucket and give the entire hat several coats of polish. She did this and the hat was stiffened, wired, and reshaped. She bought some pansies and we arranged these flat on the crown, and put a bow on the side back, made of a ribbon that the woman had cleaned. The result was unbelievable, and the woman was delighted. The total cost was 75 cents. This woman gets up earlier and works later on club days, but she never misses a meeting."

Halifax County has a new agent, who reports one of her club members as saying: "If I had known that these clothing meetings were so interesting I would have come long ago."

The following comes from Miss Edwards, the Rowan agent, who is very skillful in clothing work: "These being subjects which I most enjoy, I have found great pleasure in demonstrating them. I have arranged clothing and millinery meetings according to seasons, and have endeavored to give two successive demonstrations, especially in clothing. My plan follows: I write to all the club members and tell them I expect to have a two-day clothing school and ask them to invite their friends. In the meantime I gather all of my illustrative material together. This consists of clothing for women, for girls, and for little children. The day of the meeting we come together at 12 o'clock, eat dinner, and get to work by 1 p. m. I talk to the women first about materials, what to use, and how to buy, illustrating with samples given me by the merchants. Then I take up lines. For this discussion I have some very interesting charts showing the effect upon the appearance of vertical and horizontal lines, using the silhouette of the same woman for five illustrations. Here I show different collars and their effect upon the figure, trying them on myself or on some woman in the audience. For this subject I try to have some dresses which show the effect of vertical lines on very slender women and horizontal lines on fat women.

"I next discuss design, showing how it is influenced by the material, the occasion, and the personality of the wearer. Here I like to have costumes which are examples of good design worn by some of the women present when I can call attention to the good points in the costume. I secure these costumes by borrowing from my friends and using my own which illustrate my point. I seek dresses with good lines and little decoration. I harp on what Dr. Frank Alvah Parsons said, 'When in doubt, omit,' and make it apply to trimming on clothes. I like to have good examples of girls' and children's clothes, for my audiences are always interested in these, and also I like to show good examples of made-over dresses.

"On the second day I take up patterns, showing the difference in patterns of different makes, then I ask the women to cut for themselves a plain lining by any one of my patterns and we have a fitting demonstration. This is always valuable, for the women begin to look at their own clothes more critically after seeing their neighbors in ill-fitting garments. They get an idea here about the selection of patterns. Following the pattern demonstration, I take up finishes, necks, hems, and belts. For this I take samples of different finishes, discuss length of skirts, and recall what was said the day before about lines. When it comes to collars, I like to have many models of collars so that the women may find collars becoming to them and cut patterns for themselves. On the second day I put in color, if possible, if not, I take the next club meeting for this subject, giving some theory and use colored material on women of different types, showing the effect upon hair, eyes, and complexion.

"The work in millinery has been the most popular work that I have done, but it has been mostly individual. In the early spring I arranged with the ten and twenty-five cent stores to handle a good line of hat frames, wire, braid, and trimmings. For hat making, I arranged all-day meetings. At the suggestions of the merchants, I carried out a lot of frames and braid and let the club members select and make their hats. One merchant said that I was the best sales lady he had. Usually about six women and girls work at a time, and in this way I am able to give them individual help, both as to design and construction. With the finishing up of six or more hats enthusiasm runs high, and on the following Saturday a group of girls and women come into my office to make hats. I take parties of them shopping, and when they have purchased all supplies, they make their hats in my office. Certain girls and women have been coming in each season for the past two years for me to assist them.

"One woman, the wife of a member of the board of education, after much indecision, made a hat. The first Monday her husband, a very timid man, came into my office and said, 'I just tell you that my wife finished up that hat and wore it to church, and she looked the best she has looked in ten years.' Each time this man came to town during the

spring season he purchased millinery supplies for the women and girls in his community, coming to me each time to select them. At the community fairs I had a separate department for hats, and had some very attractive ones shown. These hats were made by women to whom I have taught millinery. I was much pleased to find the women and girls able to design and make their own hats."

Home Improvement

How many counties doing home improvement work?	9
Household furnishings—how many demonstrators enrolled in project?	101
How many rooms have been rearranged?	86
How many floors improved?	43
How many walls calcimined or papered?	115
How many kitchens have been rearranged for convenience?	17
Number water systems installed?	174
Number lighting systems installed	355
Number heating systems installed	18
Number septic tanks installed	269
Number homes improved by screening	2,454
Laundry—number demonstrators having an electric iron	1,419
Number demonstrators having a washing machine	1,929
Number home and school improvement campaigns held in 1922	9

Improvement of Home Grounds

Number demonstrators	2,234
Number demonstrators planting grass for lawn	535
Number demonstrators planting shrubs around the home	972
Number demonstrators planting flowers around the home	4,402
Value of flowers sold	$2,364.50
Number demonstrators removing unsightly fences or buildings	553
Number demonstrators planting according to a plan	912

METHODS

Home improvement is taught through lectures and demonstrations at women's and girls' clubs, through demonstrations of actual furniture

Tower and tank, Swannanoa, N. C.

arrangement in individual homes, which serve as examples for the community, through county-wide campaigns in coöperation with the school

teachers, through the demonstrations of club members who have had special instructions, and through the girls' annual short course where girls are trained to act as local demonstrators or leaders.

At the State short course for girls held in Raleigh, when 130 were present, instructions in household furnishings were given on each of five days. The girls were taught to do over old furniture and actually cleaned, painted, and decorated with a neat stencil a table and four chairs, and turned out a most creditable job. They were taught something of harmony, balance, and the use of colors, and were taken to a house furnishings department to give them a chance to show what they could do in applying what they had learned to actual selection.

The Franklin County home agent planned and carried out the first home and school improvement campaign ever held in North Carolina. After explaining in detail the coöperation of the schools and the plans, she says of her second campaign held in 1922: "The teachers had pupils write articles on the improvement made in their homes or rooms, thus correlating the work in English with club work. Club women wrote papers which were read at club meetings, and the best of these articles by the girls and women were printed in the county paper. The teachers told me that their pupils could scarcely wait for the paper to see if one of their articles had been published that week. My column in the county paper was never so interesting or so widely read. The phases of the home and school improvement work that cost the least and meant more to the appearance of the homes were painting, foundation planting, and doing over old furniture for the girls' rooms. One of my club officers herself painted her six-room home, interior and exterior, and paid for the paint with money realized from the sale of soup mixture. In another home two children, 12 and 16 years of age, hauled rock in a wheelbarrow to build up the opening between the house and the ground. Not only did they pick up the rock and haul them, but they laid the stones themselves."

The Pasquotank home agent did good work in this line this year. One hundred girls and 200 women were enrolled in the home improvement campaign. The girls had for their project the arrangement and doing over of their own bed rooms. Two hundred and fifty rooms were rearranged, 400 floors improved, 350 walls calcimined, 150 kitchens rearranged, water systems installed, 8 lighting systems, and 400 rooms screened. There were 300 demonstrators enrolled in yard improvement, 5 planted grass, 200 planted shrubs, and many of these shrubs were native shrubs that are so beautiful in Pasquotank County, 600 girls and women beautified their homes with flowers, and 75 removed fences and delapidated buildings, making the service part of the yard to the rear. The home agent said that for a few years the people thought they could not have attractive yards on account of the cattle, but at last they are aroused to the possibilities, and several in each club are putting out shrubs, flowers, and trees. The agent often carries her car full of plants

from club to club as her friends are glad to share their flowers. Plants and gardens are discussed in the meetings and definite ideas as to the arrangement of the home grounds are taken home.

The following comes from Polk, a new mountain county: "Three homes have been screened. These were a little slow, in fact, so much so that I started the screening by personal example. In two homes I screened a window each and left the others to be completed by each family. The merchant in Columbus told me later that all of a sudden many calls came for wire screening. Up to that time only a few yards had been sold. I believe from this little effort a campaign along this line next summer will be much helped. More people will screen because of a concrete example."

FAIRS

Number community fairs held in North Carolina	126
Number county fairs held in North Carolina	36
Number State fairs held in North Carolina	1

The home demonstration building at the State Fair housed a beautiful exhibit of canned products from each of forty-one counties.

The demonstrations carried on in the building were in nutrition, the preparation of food, jelly making, household conveniences, laundry work, arts and crafts (such as chair bottoming and rug making, with exhibits of finished products), poultry work, dairy work, gardening, how to standardize products for markets, bee culture, and clothing.

The live-at-home idea was running all through the teaching, and when variety of vegetables from the home garden were shown in one booth, how to use them in a well balanced diet was demonstrated in another. The same idea was carried out in the poultry, eggs, and butter shown in the poultry and dairy booths, and the nutrition booth demonstrated, also, the food value of these products.

A market stall, such as any rural people might organize, was equipped and filled with all kind of table produce from the farm. Here the assistance of the Division of Markets was secured and green vegetables were properly arranged and placed, potatoes and eggs graded, butter put in proper cartons, and standards for all other products shown. Some statistics of successful markets were displayed on placards and two home agents were in the booth to explain and instruct. One woman who made a specialty of her orange marmalade demonstrated the excellence of her product and took orders from the public.

Carrying out the income earning features, really beautiful home-made rugs of soft colors were shown. Baskets, brooms, chairs bottomed with shucks, knitted counterpanes, all made by club women, were displayed and sold for satisfactory prices.

Teams of girls and boys were brought down to the State Fair, chaperoned by the home and farm agents, and gave demonstrations in poultry judging and proper housing and feeding. These teams gave,

also, demonstrations in seed selection, how to recognize plant diseases and the remedy, stock judging, and other things. Most of these contests are to be housed in the home demonstration building in 1923.

Twenty-four home agents assisted in carrying out the State Fair program. Two to a booth, they gave the demonstrations to big audiences each day, and did much to advertise home demonstration work and what it might be worth to a county.

Community Fairs

One of the district agents says: "When it comes to arousing community interest and pride, there is nothing which will accomplish this more thoroughly than the community fair." At these fairs all of the judging is done in the open. The people are interested in knowing why decisions are made; and as only women trained in judging are asked to act, it is not hard to give reasons. Score cards are used in all judging, and as the poorer products are eliminated the audience gathers close to note the scoring from point to point. A clear explanation never fails to satisfy, and many an exhibitor goes back with a knowledge that brings her to the fair a prize winner next year.

The following comes from the Rowan home agent: "The organization of community fairs began with a fair association which was composed of one man and one woman from each township. This association met four times, drew up a set of rules, divided the county up into fair districts, and decided upon locations for four community fairs. The people of these communities met and organized, worked out details, raised funds, and put on very successful fairs. The exhibits were very good, both as to variety and quality. Mr. Yeager, farm agent, and I assisted with organization, secured an appropriation from the county board of commissioners to cover about one-fourth of the premium list, and with a few suggestions as to the management of the fairs and arrangement of exhibits, left the communities to their own initiative. We were much pleased with the spirit of coöperation and the successful management of the fairs. I sent each woman who had charge of a department a circular letter making suggestions as to the arrangement and decoration of her department, and was much pleased to find these suggestions followed very carefully, and when the hour for the opening of the fair arrived, everything was in the place with department managers at their posts exhibiting an air of satisfaction, which indicated a successful accomplishment of what they had undertaken to do.

"The spirit of community pride and of coöperation was very noticeable. China Grove, a small town, held its first fair. The mayor of the village was made president and he gave attention to the minutest detail, seeing that every plan was carried out successfully. The managers were made up of town men and farmers, members of the women's club, and farm women. Every one of them worked very earnestly for the success of the fair. Perhaps the most outstanding exhibit in the women's

department was an exhibit of fifty baskets and trays made of reed, the direct product of the girls' short course in Raleigh. Two girls from the China Grove district learned basketry at the short course and gave demonstrations in their community, resulting in an exhibit at the fair. This exhibit attracted much attention, and these girls and members of their families have been giving demonstrations in other communities."

ANNUAL SHORT COURSE FOR GIRLS

The short course for the girl club leaders is held for two weeks each year. Peace Institute, Raleigh, has opened its doors to the girls for the last two years, and this year it housed the annual school for agents as well. Each county was asked to send as many of the club girls to the short course as it could finance, and 130 entrants was the response. In some instances prize winners in poultry work, cookery, canning, and home improvement had their expenses paid by civic clubs, banks, or interested individuals, and in many cases the trips were financed by the county demonstration councils. Bladen, Columbus, and Stanly each sent 15 girls, and Cumberland and Davidson sent 12 each. The county school superintendent of Stanly County drove the agent and club girls to Raleigh in the school truck, a distance of 123 miles.

Since the annual short course is to be in the nature of a reward for club work well done, as well as to fit the girls for leadership, the idea is to give them class work in the morning and in the afternoon send them on trips around the capital city and to its many interesting institutions. The evenings are given over to recreational features.

The program of work for 1922 included: how to prepare and serve a meal, jelly making, how to do over old furniture and household furnishings, and basketry.

The assistant State agent says: "It is gratifying to get reports from our little club girls such as this: 'I have taught some of our club girls how to make those baskets, and next meeting I am planning to carry a table and show them how to fix over old furniture and make it look new. I am sure we will do our part in showing the other club girls what we learned while we were at Raleigh.' One agent writes: 'The parents of the girls were as much delighted as the girls themselves. ' I think the fact that the children had something to carry back to show made a most favorable impression. One father said he had never spent the same amount of money when he felt he had gotten such returns.' Another club girls writes: 'I have written to the different places to get the material to make some baskets. Nearly everybody that has seen my basket wants me to make them one. I am going to make one dozen and send them to the fair for Mrs. Morris to sell for me.' "

ENCAMPMENTS

Encampments for club girls and boys were held in 24 counties, and were conducted by the home and farm agent jointly.

One agent says of her camp, which was a typical one: "I consider the boys' and girls' camp the most effective and far-reaching piece of work done in the county this year. The associations along with the recreation, demonstrations, and instructions carried on at this time put demonstration work on a solid foundation and made every one of those boys and girls hail club work as his or her greatest opportunity."

The Alamance agents transported 62 boys and girls 198 miles in school trucks to the high mountains of North Carolina, as many of these children had never been beyond the hills of their own county. Many of the eastern counties chose the seacoast or the shores of a lake as a camping place.

The account of the Sampson County encampment will give an idea of the conduct of these camps: "The boys' and girls' club encampment held at White Lake last week was the biggest and most successful one ever held for Sampson County. There were 219 boys and girls registered for the full time, and those who came for a part of the time ran the total attendance up to 250 or more. This is an increase of 75 over last year's total attendance, and is worthy of note, as entrance requirements were more rigid than they were last year. Every club in the county (12) was represented except Oakhurst and Mingo Academy.

"The first day's program consisted chiefly in getting to White Lake and pitching camp, but all members were registered and assigned to rooms and tents, and all food was stored in the commissary in time for the first swim in the lake at 4:30 p. m. The regular evening program for Tuesday had to be postponed on account of rain, but the boys and girls crowded into one building and enjoyed a very entertaining social hour.

"The rising bugle was supposed to be sounded at 6 a. m., but at 5:30 Wednesday morning there was a buzzing noise coming from every quarter, which showed that Sampson County boys and girls are early risers, so we moved up our rising hour to 5:30. The children came out shivering at first in bath suits which had not dried during the night, but it required only a few minutes of setting-up exercises under the direction of camp commanders to warm them up for the morning swim. During this period each morning Dr. Hollingsworth gave demonstrations in resuscitating a drowning person. The meals were served cafeteria style, and it was an interesting sight to watch this crowd line up by clubs, march by the table to be served, and march on to the rude seats in our open-air auditorium, which also served as a mess hall. Immediately after the breakfast dishes were washed, and a squad of boys from each club was detailed to clean up the camp under the direction of the officers of the day, and get things in order for devotional exercises at 9:40.

"There were two instruction periods each day, when the boys and girls were taught how to candle and grade eggs, how to identify plants and how to do certain arts and craft work. In the egg-grading contest

all of the winning clubs made a score of 90 and above, the first making 98.3.

"In the plant identification contest the children were taught not only to recognize various plants, but to know their relative importance as well.

"There was ample time for recreation, two and one-half periods during the day, when the boys had baseball practice, and all who did not play baseball had games, story-telling, and swimming lessons. We had a very interesting program Wednesday night, beginning with a short address by Frank Peterson, the boy president of the county club. Reports were heard from members who had done club work at the State Fair and elsewhere since the last encampment, and there were talks by officers of local clubs, songs, and yells. Thursday night was stunt night. Friday afternoon we had a match game of baseball between the Sampson and Bladen County clubs, when Bladen won. The behavior of the club members during the week was excellent. The discipline was a marvel to the visitors when they saw such a large number of boys and girls assembled from all over the county. It was made possible by the excellent assistance of the local leaders of the various clubs who deserve the credit for the success of the encampment."

COUNTY-WIDE CAMPAIGNS

Number of county campaigns held in 1922	225
Number of bread campaigns held in 1922	35
Number of garden campaigns held in 1922	29
Number of home and school improvements	9
Number of housekeepers' weeks	1
Number of school lunches	15
Number of home conveniences	15
Number of county rallies or picnics	67
Number beautification of premises	12
Number of dairies	3
Number of grape products	10
Number of others	14
Number of counties promoting the "live-at-home" campaign	47

Every county organized in home demonstration work is asked to put on at least one county-wide campaign during the year that every part of the county may be reached with home economics instruction. The "milk for health," the "better bread," and the "school lunch" campaigns have been reported under nutrition, home and school improvement, and beautification of premises under home improvement, and the "live-at-home" campaigns under gardens, poultry, and dairy work.

Another interesting campaign was that put on in the eastern counties, where the muscadine grape is abundant, and where the people were calling for instruction in conserving the great crop.

Campaigns were put on in Moore, Lee, and Scotland counties, and group meetings were held in 3 or 4 communities in each county where demonstrations were given in making cold pressed juice, grape paste,

jelly stock, and jelly. The women receiving instructions put on excellent exhibits of grape products at the community, county, and State fairs, and the sale of muscadine jelly has become a means of adding to the family income.

COUNTY COUNCILS

Number of counties having county home demonstration councils	35
Membership	1,967

When a county is organized in home demonstration work the agent is urged to bring together a council of women composed of representatives from each club or community. These women act as an advisory board, and meet with the agent once a month, or sometimes at longer intervals, to give reports of how the work is going and to help plan for further work. They appear before boards when appropriations are to be asked for, and they come to answer any complaints of the work which may be brought to the boards.

Occasionally the council asks the board of education and the county commissioners to lunch in the office of the home demonstration agent, which is in almost every case in the courthouse. At this time certain plans are discussed and reports of what has been done are given. The visitors are fed some of the dishes the women have been taught to prepare, and members of boards get at first hand an important phase of home demonstration work.

In Northampton County an advanced girls' club, which had studied balanced meals and table service, served the commissioners and board of education at a special meeting. Miss McLawhorn, home agent, says in regard to this meeting: "We baked the cakes the day before the meeting and cooked the chicken in the steam pressure cooker. The girls made the dessert to go with the cake and decorated the table. The menu consisted of chicken soup, chicken croquettes, ham, pickle, creamed peas, potatoes, hot biscuit, and butter, tomato salad on lettuce, and peach bavarian cream with cake, mints, and coffee. The preparation of this dinner was the best lesson in foods this club ever had, and certainly showed the boards the resourcefulness of club members who could serve sixteen in an office with such inadequate equipment."

The council backs the club and stall markets, backs the girls' club work, and its individual members are demonstrators of the agents teaching in their own communities.

The girls are asking to have a council of their own, and several counties will try it in 1923.

The Hertford home agent says: "I remember distinctly the first meeting of the county council. One woman from a community that was listless pledged herself to go home and arouse interest for this big home work. She certainly succeeded, for today this backward community is so alive that they have changed their name from Mill Neck to Christian Harbor. Other sections have been awakened by the same influence, and

today the demonstration agent has a hearty welcome to almost every section of the county. During the year the roads have been so hard to travel that the county council women have found it hard to come to the county-seat to regular meetings. In consequence, I have been going from section to section in my car to get them together, carrying them to some central point in the county for a discussion. There is, however, one big business and social meeting which always falls on the first Monday in December, when all members assemble at the county-seat as guests of the home demonstration agent. Plans are made for the year's work, and they are on hand to appear before the board of county commissioners to push the appropriation through."

The Franklin agent says: "My county council and town advisory council met Friday. It was open to the public, though I did not spend any time advertising it. We had reports from most of the clubs of the county and short talks by the members. I felt so proud of those girls and women who stood up and talked. Four years ago they would have fallen if I had insisted on their talking in public. We had nearly 200 present."

Miss Bordeaux, the new agent, has a fine type of women to support her.

STATE FEDERATION OF HOME DEMONSTRATION CLUBS—CALLED THE STATE HOME BUREAU

Finding the county federation of clubs represented by the county councils so helpful in advancing home demonstration work, the councils thought it wise to form a State federation of home demonstration clubs, which should have its annual meeting at the State College, Raleigh, when the farmers' and farm women's convention meets. A preliminary meeting was held at the college in August, 1920, and in 1921 delegates came from 14 counties which had decided to federate. In 1922 regularly appointed delegates came from 32 counties, 128 in number, and interested club members came with them. There were in all 250 people attending.

Most inspiring reports were given of how home demonstration work was conducted and the results obtained, and the spirit of the meeting was remarkable.

AFFILIATION WITH STATE FEDERATION WOMAN'S CLUBS

At the 1921 August meeting of the home bureau it was decided to affiliate with the State Federation of Woman's Clubs, and to that end a committee was appointed with the State home demonstration agent as chairman, to meet the federation council and talk over plans for the proper affiliation of these large organizations.

Plans were worked out which were later unanimously adopted by both organizations.

COOPERATION WITH OTHER ORGANIZATIONS

In 1922 the Division of Home Demonstration Work planned to do definite work with the State departments of health and education, and with the following divisions of the extension service: Animal Industry, Horticulture, Markets, and Farm Demonstration. The State home agent conferred with all heads, and after policies were determined, plans were outlined for county work.

COOPERATION WITH STATE DEPARTMENT OF HEALTH

In the Department of Health work was planned with the bureau of maternity and infant hygiene and with the public health nurses. These agencies are glad to work with the well organized piece of machinery the women's and girls' clubs have grown to be, and the county agent is asked to arrange definite times and places and to fit the health program into her plan of work.

COOPERATION WITH DEPARTMENT OF EDUCATION

The coöperative plans between the State home demonstration agent and the office of State Superintendent of Public Instruction embrace negro work, the beautification of school grounds, and a proper understanding of the relations between Smith-Lever and Smith-Hughes work.

The head of the home economics vocational work and the State home demonstration agent have agreed upon a policy for the employment of agents and teachers, and have conferred frequently regarding applicants for positions. They have talked over their separate fields and agreed that home demonstration work shall have the instruction of rural girls and women outside of the schoolroom and Smith-Hughes inside. Smith-Hughes conducts special classes for women in large villages and towns, and Smith-Lever organizes them into home demonstration clubs in the smaller places.

The following story from Craven County is a good example of the coöperation of educational and other forces with home demonstration work: Craven County, which had been organized in home demonstration work only two months, through its home agent arranged with the county board of education to use the school trucks to transport sixty club girls and women to the farm women's convention in Raleigh, 120 miles away. The home agent says: "The county superintendent of education was the best coöperator any one could wish. The trucks were ours and the board of education gave me a letter of credit for $100 to pay for gas, oil, and any repairs.

"The county board of agriculture gave me another $100 bill to pay for the meals of the girls and drivers while we were in Raleigh. The county welfare officer, a woman who has given us fine coöperation, went to chaperon one of the five trucks and the mothers and I chaperoned the others."

COOPERATION WITH DIVISION OF ANIMAL INDUSTRY

Coöperation with the Division of Animal Industry was in poultry work, through poultry specialists; home dairy, dairy specialist; milk for health campaigns; the livestock meeting, and the joint preparation of a bulletin on "Pork on the Farm."

COOPERATION WITH DIVISION OF HORTICULTURE

Coöperation with the Division of Horticulture was through a joint garden project. Arrangements were made for getting the best results from the garden and farm beautification specialist by well planned meetings of home demonstration clubs and through the use of garden bulletins from the Division of Horticulture.

COOPERATION WITH DIVISION OF MARKETS

Coöperation with the Division of Markets was through instruction in grading and market standards to county councils by specialists and through their assistance in organizing curb and club markets.

COOPERATION WITH FARM DEMONSTRATION WORK

Plans for coöperation between the Division of Home Demonstration Work and Farm Demonstration Work were made after a conference of the State home agent, the director, assistant director, and State farm agent. A committee was appointed to arrange coöperative projects. The following were planned for: Boys' and girls' club work, encampments, county and community fairs, community clubs, poultry work, county campaigns, and work in unorganized counties. Farm and home agents are to meet at State College, December 10, to definitely decide on their coöperative projects for 1923.

COOPERATION WITH THE GOVERNOR OF THE STATE

The Governor of the State is much interested in a campaign to induce each farm to feed itself, and to that end he called in for consultation the different State departments which might help in its inauguration. The Department of Agriculture and the agricultural college were represented by Director B. W. Kilgore, President W. C. Riddick of the college, the dean of agriculture, and the State home demonstration agent; education, by the State Superintendent of Education and the head of vocational work in agriculture; health, by the secretary of the State board. These heads met and talked over ways and means and appointed a committee with the State home demonstration agent as chairman, to draw up plans which should engage the efforts of all the State departments represented.

Results of this campaign will be seen under gardens, poultry, and dairy projects.

Program of Determination

To plan programs for the year the district agents were called to the head office in November, and there we talked over and planned outlines to submit to county agents that they might have ready their plans for the January meeting of the staff. Every agent submitted a plan. How well they were carried out will be seen by the county-progress reports. Very few counties could carry out a uniform program for every community. There was the question of first-year work, intermediate and advanced work to be planned for, but the plans for each type were in most of the counties practically the same.

Maintenance and Training of Personnel

Very definite plans are made for the installation of a home agent in her territory. District agents announce the time of arrival to the local county council, and, if there is one, to the woman's club, and to the church people. The farm agent is notified, and also the county superintendent of education. If possible, the district agent is at the county-seat to welcome the agent and to get her well established in a comfortable home; realizing that to do efficient work an agent must be happy in her home life. The county superintendent of education and the farm agent are visited next day, and coöperative plans for work are talked over. The agent's office is usually in the courthouse, 44 of the 53 agents being so housed. As early as possible the home agent is introduced to the county commissioners and to the board of education. Arrangements are made about a car, and the assistance of the farm agent and the school supervisor secured in pointing out roads and club centers. Cars are owned by the Division of Home Demonstration Work in 45 counties.

Where it is possible to get a new agent two or four weeks before the old one leaves, I have found it a good plan to apprentice the new agent for that length of time to an experienced agent, where she can learn organization and methods.

Annual School for Agents

The annual school and conference for agents is the most important means of training agents. Every agent is required to attend, and for the ten days of instruction she is a hard-worked individual. Each year special phases of home economics are stressed and the best specialists to be had are employed as instructors. This year the major subjects were dress design and nutrition, and Miss Mary Brown, of Pratt Institute, was employed to give the one, and Dr. Halverson, nutrition specialist of the N. C. Extension Service, the other. At the annual school for agents it is at the hour and a half conference period each day that administration and organization problems are discussed, and it is there that the agents get inspiration by hearing the results of each agent's work. A certain time each day is set aside for the State agent's conferences with indi-

vidual agents. It is then that she can get close to the worker in her plans and aspirations, and learn to know her personally as well as professionally.

The following schedule was carried out at the school for agents: dress design, three hours lecture and laboratory work; nutrition, two periods of instruction, three hours each, consisting of lectures and a visit to Dr. Halverson's laboratory to see effects of feeding on white rats; special work in conservation of foods, two periods, two hours each; the art of demonstrating, three periods, one hour each; special lectures at night; organization of federation of home demonstration clubs; "live-at-home" campaign; publicity; coöperation of farm and home agent; home gardening; fairs; cooperation with Bureau of Maternity and Infancy Hygiene. Conference period, one and one-half hours each day. Discussion of administrative problems, plans, and other topics.

SPECIALISTS

The Division of Home Demonstration Work coöperates with the Division of Farm Demonstration Work in the use of the poultry, dairy, and gardening specialists, and in the services of the nutrition specialist, Dr. Halverson, who is ours for consultation, and who can be called upon for investigations and lectures, but does not visit in the field.

We have found the arrangements with these specialists most satisfactory, and the training of the men exceptional. For specialists in other home economics lines we are using the assistant State agent and the district agents, who serve in a double capacity. The assistant State agent is clothing specialist; the Piedmont district agent, specialist in household furnishings; the central district agent, in foods; the Tidewater district agent, in marketing, and the eastern district agent, in organization and recreation.

North Carolina is a State of 100 counties, and one specialist would be so thinly spread that our policy is to have the agents get intensive training in the subjects they are expected to teach. Having them thus fortified, the specialist finds it easy to multiply herself through the well prepared agents. It is here that the special work in the annual school for agents is telling.

PUBLICITY

Twenty-eight home agents have regularly set aside corners in the local papers, and thirty-nine tell of their work either in the corners or in allotted space. Forty-six of them give timely recipes and instructions and fourteen use stereopticon or motion pictures as a means of publicity.

The State agent's office has no difficulty in getting publicity for home demonstration work. Correspondents from the *News and Observer,* the *Greensboro News,* and the *Raleigh Times* visit the office regularly and give home demonstration work prominent space in their columns. Representatives from each of these papers came to the girls' short course in

June and the farm women's convention held in Raleigh, and gave daily write-ups. The other big State papers have published material which has been sent them advertising meetings to be held, and also accounts of those meetings, and they have frequently petitioned for stories of work accomplished. The district agents' monthly résumés of the work have been sent to papers in their districts and have been gladly received and published. The Division of Publications syndicates articles from the State agent and others on timely subjects which most of the State papers print. These articles are sent also to the home agents in the counties with the request that she put them in the county paper. From the number of papers using the copy, it would seem that the articles have been successful.

The following from Anson County will show how a county agent conducts her publicity: "For four years the home demonstration agent has conducted a corner in the county paper. We first named it 'In and About the Home,' but later changed it to 'The Women's Corner.' The editors have been very loyal to the agent and never fail to get the material in. The women of the county look on the 'Corner' as their special page in the paper, and very often write the agent their appreciation of it. They also ask that special recipes be printed. We have had requests from Georgia, Virginia, and South Carolina for recipes that had been printed when the writers lost the clippings.

"In conducting this department the object primarily is to foster and to promote the home demonstration work. In doing this we find that the articles must be timely, but must be varied, and must appeal to the interest of as many different people as possible. We have adopted the practice of reporting the club meetings, bringing in the names of the club members. Often I weave in a human interest story, telling the humorous as well as the practical side of the work. Figures and details are occasionally given, boosting the marketing of country produce. Products marketed by parcel post are published and names of producer and consumer are given. Sometimes we top it off with a bit of poetry, occasionally we include games and contests for the young folks, and always I add one recipe for seasonable dishes. We take up the canning of fruits and vegetables as they come on, usually getting the recipes in the week before. For instance, we give a half column on strawberries, peaches, pickles, or what to do with peas, grapes, or green tomatoes, as the case may be. Nutrition articles are printed also, and good articles gotten out by the State department. I passed an old man not long ago on the street who called to me and said, 'Mrs. Redfearn, I just want to tell you that I read your piece every week. I am too old now to get out much, but it makes me feel like I'm right with the folks you're talking about, and sometimes I read it over twice.'"

New Counties

Between March and June of 1922 the county commissioners and the boards of education in four new counties, Scotland, Craven, Wilkes, and Polk, appropriated for the employment of a home agent; and between June and December, Chowan, Bertie, Edgecombe, and Jackson appropriated. All of these counties were supplied with agents except Bertie, where an agent begins work January 1.

During the year one county, Stanly, dropped the work.

Changes in Agents

Agents resigned in Buncombe, Columbus, Guilford, Halifax, Northampton, Onslow, Pender, and Mecklenburg. Five of these agents resigned on account of marriage, one because of ill health, and two we thought better adapted to the schoolroom than to the field.

The former Moore County home agent was transferred to Mecklenburg, and the former Nash agent to Scotland.

Mountain Counties

Because the mountain district had in January only three organized counties, it was planned to increase the number, if possible, to six counties in 1922.

To create interest and to give publicity to what home demonstration work can mean to the mountain home it was arranged to have the assistant State home agent, three district agents, and a good field agent secured from Converse College to go to unorganized mountain counties to do intensive work for one month each in the summer. Two of the counties are remote from railroads, and all are virgin ground so far as home demonstration work is concerned. Plans were made for demonstrations in the preparation of food, the making and use of a fireless cooker, and lectures and demonstration work in health, hygiene, nutrition, and household management. Each agent carried a simple equipment packed in a suitcase, with an oil stove in addition. Plans arranging for meetings on definite days and in definite places were made with the farm agent in five counties, and also with the county superintendent of education. These agents received the finest coöperation from editors and organizations in the county-seat. As a result, Jackson County appropriated $1,300 as its part of the cost of home demonstration work, and Burke and Watauga express a desire to come in next spring.

STATE AGENT'S STATISTICS

Miles traveled	6,020	Other trips	15
Meetings attended	102	Letters	1,729
Attendance	24,785	Circular letters	1,678
Agents visited	21	Conferences	832
		Articles	30

ASSISTANT STATE AGENT'S STATISTICS

Miles traveled	10,496	Letters	596
Meetings attended	211	Circular letters	2,088
Attendance	16,227	Bulletins	2,899
Agents visited	48	Conferences	1,173
		Articles	7

COUNTY AGENTS' STATISTICS

Miles traveled	307,034	Attendance	415,060
Meetings attended	11,167	Letters	17,599
		Conferences	47,639

DISTRICT AGENTS' STATISTICS

Miles traveled	43,911	Letters	3,755
Meetings attended	623	Circulars	3,491
Attendance	91,797	Bulletins	2,841
Visits to agents	222	Conferences	3,079
		Articles	107

Work for Negroes

Home demonstration work for negroes was begun in February, 1922, and would have started earlier had it been possible to secure well trained negro women for agents.

There are at present six counties organized with a whole-time agent in Wake, Wayne, Anson, Beaufort, Johnston, and Columbus. Agents in these counties are assistants to the white home demonstration agent, and the work is carried on through clubs for negro women and girls in selected rural communities. On the whole, results accomplished are satisfactory.

Anson and Beaufort counties began work in February and March; Wayne, Wake, and Columbus in June and July, and Johnston in October. A part-time agent did work for two months in Moore.

The following report will serve to show the methods used in reaching the colored people: Emma McDougald began work in Wayne County on the 15th of May, and now has 14 women's clubs with an enrollment of 235, and 2 girls' clubs with 20 members. These were organized through visiting the churches on Sunday, where she presented the work, and through visits to individuals. The story of her work in her own words is here told:

"I took the work in Wayne County the second of May, 1922. The task seemed too much for me, and if I have done anything it has been through the Lord and good friends. Mrs. Smith, district agent, and Miss Bogle and Miss McEachern, county agents, have been a wonderful help to me.

"May is a very busy month for farmers, made doubly so in this county because lots of the farmers are truckers. Then hail storms ruined the farms in some places and the second planting was necessary. Next,

heavy rains drowned some parts of their farms, and on other parts of it the grass was playing hide-and-seek with the women and children.

"When I started work most of the schools had closed and my only opportunity to see the people was to meet them at their churches. I did this when I could, and found a very warm welcome. In most cases the women were a little wary about joining an organization, but soon they saw the point, and only once did I fail to get my clubs. I did not let them go, but got them by visiting them at home and talking it over.

"Meeting the people at their churches was all right, but it was every seventh day, and my work was moving too slowly, so I went out in the fields and everywhere that I could get a woman or family to listen to me. They generally listened and gave me their names. By December 1st I had 14 women's club with 235 members, and two girls' clubs with 20 members. I have not tried to form any more clubs, as these are about all I can look after. I do a good bit of walking, and then I hope to do some more work with the schools. I have missed two engagements because the men I had hired to take me did not come.

"The following are the demonstrations which I have been able to give: canning, balanced meals, bread-making, clothing, care of clothes, and gardening.

"The gardens are very poor, so I am begging the people everywhere I go to plant fall and winter gardens. I am glad some of these are growing beautifully. I name a number of vegetables which may be planted at the time. The men and women promise to do what they can with these gardens now, and next spring to have better gardens with a greater variety of vegetables.

"I give health talks about infants, children, and grown-ups. Miss McEachern gave me lots of literature along this line, and I give it to individuals, especially to midwives and mothers. When I get the right kind of bulletins, I leave some of them in churches by permission. The people seem very glad to have them, and the women are very glad of the cook books and child-feeding books. I talk and demonstrate good bread everywhere I go.

"I was able, through Rev. McCleod, to get about 35 people to take the vaccination for the prevention of typhoid, and got the county nurse to go with one of the city nurses to see a white woman in the county whom I considered very sick.

"I talk home-getting and self-respect to the men and schools, and self-respect to the young folks. I am glad to help any one I can. The greatest good to the greatest number is my motto."

The Wake County assistant presents the following outline of her food work: milk as a food, food for children, how to prepare left-overs, ways of using corn meal, preparation of vegetables for the table, cheese and butter making, protection of food from flies, molds, and dust.

FAIRS

The negro home agent, in coöperation with the negro farm agent, promoted and helped to organize 10 community fairs for their people, and assisted at the Negro State Fair.

STATISTICS OF NEGRO HOME DEMONSTRATION AGENTS

Number girls clubs	61
Enrollment	1,904
Number women's clubs	62
Enrollment	1,904
Number community clubs	27
Enrollment	1,546
Total enrollment	5,354
Number club meetings	294
Number other meetings, such as church, etc.	38
Total number meetings	332
Attendance	1,476
Miles traveled	6,535
Homes visited	1,178
Schools visited	75
Conferences	194
Letters	643
Days in field	551
Days in office	116
Number demonstrations in clothing	84
Number club members enrolled in food work	1,052
Number demonstrators in canning	602
Number quarts vegetables and fruits canned	20,663
Value	$5,165
Number quarts preserves, jellies, and jams	3,075
Value	$2,460
Number quarts pickles, relishes, and catsup	2,264
Value	$1,132
Number quarts vinegar	132
Value	$13.20
Number quarts juices	301
Value	$45.15

Respectfully submitted,

JANE S. MCKIMMON,
State Agent.

REPORT OF THE DIVISION OF AGRONOMY

To the Director:

The past year has been an exceedingly busy one for the Division of Agronomy. The main work of the division has been along the same general lines as reported in previous years, but on account of the coming of the boll weevil to North Carolina, added effort has been made to induce our farmers to build up their soils by fertilizers, the use of lime and cover crops; to use pure seed of standard varieties and seed best suited to their conditions; and to diversify their farming, thereby running away from the one-crop system practiced by so many farmers of our State.

During the year North Carolina farmers have been brought to a keener realization of the importance of using the most productive and best suited seed possible to obtain for their different conditions. They, too, have been made to realize that they may produce on their own farms much better seed than they have been using in the past. One of the cheapest grains the farmer can get is from the planting of seed of the best suited varieties of the different crops he is growing. If all our farmers should use seed of the crops best suited to their conditions and needs, with an average good season and with average good fertilization and cultivation, the increased yields and their value from the use of better seed over the ordinary seed commonly used should be as follows for the State next year, based upon differences secured in our field demonstrations on farms in different parts of the State:

	Increase from good seed	*Price*	*Annual Value*
Corn	5,104,000 bu.	$ 0.75 bu.	$3,828,000
Cotton, lint	160,000 bales	.20 lb.	16,000,000
Cotton, seed	80,000 tons	45.00 ton	3,600,000
Wheat	414,000 bu.	1.50 bu.	621,000
Rye	118,784 bu.	1.00 bu.	118,784
Oats	542,091 bu.	.60 bu.	325,254
Soybeans	269,250 bu.	1.35 bu.	363,487
			$24,856,525

Extension Field Work in Soils and Crops

The main problem being attacked in this work is the improvement of the soils of North Carolina. We are recommending organic matter as the one greatest need of our soils. A sufficient quantity of this material can be secured only through suitable crops and crop residues; for the State produces a relatively small number of livestock in proportion to the land in cultivation. Legumes are considered the best crops for this purpose, because they can utilize nitrogen from the air. The taking off of any crop, even a legume crop, does not improve the soil, but injures

it to some extent. Therefore, we recommend that some suitable crop be turned under to supply organic matter and plant food to the soil. Systematic rotation will facilitate soil improvement in this manner.

Diversification of crops goes hand in hand with soil improvement and the practice of rotations, and this fact has been emphasized. With some soils, lime is of direct benefit to all crops. On many more it benefits legumes directly, and when the legumes are plowed in, the soil is enriched for succeeding crops.

Gambrel-roof barn on farm of C. D. Harrelson, Columbus County.

Fertilizers should be used to increase crop yields in a soil building rotation, and this division has considerable information about the proper use of fertilizers in all parts of North Carolina. The home-mixing of fertilizers is often a paying practice. Fertilizers and lime have received attention at nearly all meetings and farms visited this year.

Field meetings have been held to discuss improved seed for growing more and better crops. At present there is great interest in permanent pastures in the State, and considerable instruction has been given in starting and caring for them.

The work has been done almost entirely in coöperation with county agents, with agricultural high schools, and with fairs. The methods used were personal visits to farms, indoor meetings, field meetings, field demonstrations, and exhibits at county fairs. The following thirty counties have been visited during the year: Alamance, Alexander,

Beaufort, Buncombe, Carteret, Caswell, Cumberland, Currituck, Duplin, Durham, Hertford, Iredell, Jones, Lenoir, New Hanover, Northampton, Onslow, Pasquotank, Perquimans, Pitt, Richmond, Robeson, Sampson, Scotland, Stanly, Tyrrell, Union, Vance, Wake, and Wilson.

About 300 farms have been visited, where advice on various agronomy problems were given. Usually from three to five subjects were taken up at each farm.

Fifty-seven indoor farmers' meetings were held, most of them in the winter and late summer after crops had been "laid by." The average attendance at meetings was 20, an increase over last year. At most meetings farmers showed their interest by asking questions for fifteen minutes to one hour after the speaker had finished. Some of the smaller meetings were the best, because farmers always feel free to ask more questions at a small meeting than they do at a large one.

The field meetings were very similar to the indoor meetings. They were held on farms where there was something of interest to show in the way of growing crops. The total attendance at all meetings was 1,467.

Last spring we started 34 simple demonstrations to show the value of using lime in growing legumes, and of turning under a leguminous crop for soil improvement. Four such demonstrations were continued from 1921. The plan usually followed is to lime half of a field and to grow a summer legume the first year, followed by a winter cover crop. These two crops are removed on half of the limed part and on half of the unlimed part of the field, and the rest is turned under. Corn is to be grown the second year. Another plan is to compare the effect of the taking off or turning under of crimson clover upon corn, following the clover. A plat on which no clover has been grown is included, if possible. On a demonstration of this sort in Jones County as a type, the following results were secured this year:

Plat No.	*Treatment*	*Yield corn per acre*
1.	Crimson clover grazed closely till April 15, then allowed to grow 18 inches high, turned under May 15, 124 pounds 8-3-3 fertilizer used per acre	41.5
2.	Crimson clover grazed closely till May 15, then turned under. 125 pounds 8-3-3 fertilizer used per acre	37.7
3.	No crimson clover. 125 pounds 8-3-3 fertilizer and 200 0-0-2 top dresser used per acre	34.6
4.	No crimson clover. 125 pounds 8-3-3 fertilizer used per acre	26.1

In this demonstration the cost of sowing the clover was $5 per acre, and the cost of the top dresser used on plat 3 was $5 per acre. The clover afforded at least $10 worth of grazing per acre, and more than took the place of the top dresser. The grazing was clear profit, as was shown by the increase in corn yield of plats 1 and 2 over plat 3.

An all-day field meeting, punctuated by a barbecue dinner, was held at this demonstration. The farmers present, 20 in number, harvested

and weighed the corn from each plat. G. M. Garren, of the Division of Agronomy, demonstrated field selection of corn. Jones County has heretofore grown cover crops very little. It is hoped to increase their use through this and other demonstrations.

Of the total thirty-eight demonstrations, seventeen have been abandoned for various reasons, leaving twenty-one in operation. Field meetings have been held at twelve of these, at which 116 people were present. Most of them are in the first stage, showing simply the effect of lime on the first crop. Next year they will be in corn, and we hope to have many meetings like the one in Jones County.

Mr. Blair has prepared and staged exhibits and acted as judge at three county fairs, and superintended the Corn Show at the State Fair. The exhibits excited much favorable comment. The Corn Show at the State Fair has been greatly improved, and is getting to be an event of real educational value. It is estimated that 3,000 people, at the very least, have been given effective instruction at fairs.

In addition to the above work, the writer attended the State meeting of county agents at Raleigh in January, the meeting of the eastern and northern districts at Wilmington in July, and the meeting of the central district at Jackson Springs in August.

Extension Crop Improvement

Community Seed Improvement. Community seed improvement work has been the major field crop extension project of the past season. The work has consisted of community variety and seed-selection demonstrations with cotton, corn, wheat, oats, rye, soybeans, and sorghum. The requests for help in this work have been much greater than the present force of workers could handle during the planting and harvesting season. While some of the communities organized in the past are well established and require little attention, most of them require inspection and help to keep their seed up to standard, and to prevent the introduction of new varieties or old varieties under new names. Changes in county agents have also made it necessary to repeat some of the work. During the past season a special effort was made to reach a few cotton-growing counties that do not have county agents, and others that have recently secured agents. The cotton variety demonstrations were extended to 14 communities in ten counties. Two of the counties reached in this work did not have the services of a county agent and were growing very inferior varieties of cotton. Field selection demonstrations were conducted in 24 communities of eleven counties. These communities will produce approximately 40,000 bushels of improved cotton seed. Since the work started in 1914, 105 communities in 36 counties have been reached in the work. In only two of the 105 has the work failed to introduce a better strain of cotton. The average increase of the improved strain over the variety generally grown in the community has amounted to

$22.32 per acre. This season, thirty-three counties were given help in the improvement of their cotton seed. As a result of community variety demonstrations and exhibits, 10,850 bushels of improved cotton seed were introduced this spring into communities that had previously grown inferior varieties. In addition to this, the cotton breeders, with which the Division of Agronomy is coöperating, sold approximately 12,000 bushels in their local communities, and 6,750 bushels were shipped out of the State.

Community Seed-corn Improvement. The community corn improvement work has consisted of community variety demonstrations and field selection demonstrations with the purpose of establishing uniform standard varieties in each community. Since corn is grown very generally over the State, an effort has been made to locate the demonstrations so as to form seed-corn centers for the different sections of the State. This work was conducted in 28 communities of 19 counties. These counties are distributed as follows: One in the Mountain, 10 in the Piedmont, and 8 in the Coastal Plain section. Five of the eight demonstrations in the Coastal Plain section are located in the tidewater section, where corn is an important crop. The communities of Edgecombe, Chowan, Gaston, and Forsyth counties that have been established three or more years are showing considerable progress. This is particularly true of the Cherryville community of Gaston County, where the Division of Agronomy has been coöperating in a community corn show during the past four years. The display of more than 300 uniform exhibits of ears this year was quite a contrast to the mixture that was exhibited at the same place four years ago. On account of the general interest in seed-corn selection in this community, it has become a popular source of seed corn in that section of the State. In addition to the community work, individual help has been given six established corn breeders of the State.

Community Small-grain Work. This work has consisted of following up communities in which improved seed have been introduced, by improving small grain in new communities, and in conducting variety demonstrations. The follow-up work includes the inspection of increase fields, and examining the harvested seed for mixtures and germination. The increase fields were located in nine counties and included 24 fields of wheat, 11 of Abruzzi rye, and 5 of pedigreed oats. The amount of the harvest from the fields that could be recommended for seed purposes was 5,300 bushels of wheat, 2,600 bushels of Abruzzi rye, and 1,155 bushels of pedigreed oats. Lists of these sources were prepared and supplied county agents, inquiring growers, and roller mills. On account of the large shipments of Rosen rye sent into the State from Michigan, some time was spent in giving publicity to its poor qualities when grown under North Carolina conditions. The growers of improved small grain seed found ready sale for their seed. Records are being kept of growers

who secured improved seed with the object of establishing sources of good seed in other communities.

Soybean Improvement Work. The soybean work has consisted of variety demonstrations, supplying growers with pedigreed seed from the Experiment Station selections, and listing growers who have good seed for sale. During the year, nine soybean demonstrations were conducted in eight counties. Growers, county agents, and vocational schools of 34 counties have received help in presenting soybean information to the farmers of their different sections. This includes 7 Mountain counties, 9 Piedmont counties, and 18 Coastal Plain counties. The soybean work has been pushed with the object of establishing the crop in communities that are not generally growing it, and to improve the seed produced by the older soybean sections. Since the soybean has become more popular as a hay plant, there has been considerable interest in the increase of the station's pedigreed strain of Virginia soybeans. The new strain of Haberlandt No. 38 has also met with success in the Piedmont and Mountain sections. It will become to the Mountain and Piedmont sections what the Mammoth Yellow has been to the eastern section. All of the vocational schools have been supplied with samples of soybean seed of varieties best adapted to their sections. These seed have been used for teaching specimens and for conducting field demonstrations.

Sorghum Improvement Work. One grower has been established in the growing of pure seed of the honey sorghum. Approximately 200 pounds of this seed was sold to growers of the State last season, and 300 pounds have been saved this year.

General Field Crop Extension. In addition to the regular extension projects, the Division of Agronomy has been called upon for more general services. During the past season this has included a two-weeks boll-weevil campaign covering twelve counties; in preparation of exhibits for six county fairs; preparation and handling of two pure seed exhibits for aiding county agents in the introduction of improved seed; in judging at five county and three community fairs; in conducting part-time classes for adults in two vocational schools; in preparing charts and other information for county agents and teachers of agriculture in vocational schools; and in conducting a meeting of the State Seed Breeders' Association.

Summary of Agronomy Extension Activities in Crop Improvement and Soil Fertility

By R. Y. Winters, S. W. Hill, P. H. Kime, and G. M. Garren

CROP IMPROVEMENT

Agencies with which the Division Coöperated	*Nature of Coöperation*
50 County Agents	Seed improvement demonstrations, newspaper articles, circular letters, charts, seeds, identification of weeds and varieties of field crops, examination of seeds, information on best varieties and cultural methods, and exhibit material.
68 Communities	With definite seed improvement projects.
Newspapers and Farm Journals	Sixty-four newspaper articles to daily and weekly papers reporting local demonstration work and general timely articles supplying information of general interest to the section of the State. Every section of the State was represented in this work.
26 Vocational Agricultural Schools	Supplied with specimen field crop seed, information for teaching work, and aid in the conduct of part-time classes for adults.
5 Banks	Conducted field crop exhibits in their lobbies for the purpose of introducing better seed in their counties. Each of these banks helped finance the introduction of good seed. Resulted in the introduction of 1,385 bushels of pure cotton seed.
1 Oil Mill	Supplied articles and circular letters on spacing cotton and selection of seed to meet boll weevil conditions.
Ginners	Supplied information on the importance of coöperation with cotton growers in saving their seed pure at the gin. Several public gins have given splendid cooperation in this work.
5 Cotton Mills	Coöperated in the introduction of better varieties of cotton and supplied information on the spinning qualities of North Carolina grown cotton.
County Welfare Officer	Coöperation in a county that had no agricultural agent in the introduction of 1,000 bushels of improved cotton seed.
Fairs	Coöperated with the State Fair, 7 county and 2 community fairs in presenting information on the importance of improved seed.
Cotton Marketing Association	Coöperated in the preparation of 3 exhibits to show the importance of using good cotton seed of approved varieties and the mill waste that comes from poorly picked and badly ginned cotton. Started work on the location of 100,000 bushels of inspected cotton seed of improved varieties to be used in the State.

Agencies with which the Division Coöperated	*Nature of Coöperation*
Seed Improvement Association	Conducted a meeting of the State Seed Association at the State College, and coöperated with the local association in the sale of 30,000 bushels of improved cotton seed, 2,000 bushels of seed corn, 4,000 bushels of wheat, 2,000 bushels of oats, 2,500 bushels of Abruzzi rye, and 50,000 bushels of soybeans.
Department of Plant Pathology	In the inspection of seed for diseases.
Seed Laboratory	In the germination and inspection of samples of seed from breeders and other growers.

Distribution of Work

Workers	*Specialty*
R. Y. Winters	General Seed Improvement and Cultural Work.
G. M. Garren	Corn and Small Grain Seed Improvement and Culture.
P. H. Kime	Summer and Winter Legume Seed Improvement and Culture.
S. W. Hill	Community Cotton Improvement.

The above is the true organization of the work, though at all times the rush of work in spring and fall has required the team work of all workers regardless of specialty. In order to conserve time and travel expense, the work has been scheduled according to sections of the State so that one worker may handle two or more projects in several counties, if possible.

Number counties reached with a definite project (Five of these had no county agent.)	55
Number of field meetings	51
Attendance (average)	8
Indoor meetings	73
Average attendance	61
Number circular letters written	13
Total number circular letters sent out	7,334
Number of letters dictated	2,248
Number newspaper articles prepared	64
Office consultations	205
Number of miles traveled	18,598

SOIL FERTILITY

By W. F. PATE

During this period 12 county agricultural agents were visited and 22 demonstrations were also visited. While with the county agents, 9 different farmers were visited on their farms and advice given relative to their soils, fertilizers, and crop rotations.

Forty samples of soil were examined for soil acidity and the amount of lime to neutralize was determined. The type of these soils were established and the fertilizer requirements for special crops were recommended.

During the year, 20 meetings were attended and 1,500 people were present at these meetings. Lectures were given on subjects that were timely, and in which the farmers were then interestd. These subjects included the fertilization of corn, wheat, cotton, and tobacco; the rotation of crops to use for the Mountain, Piedmont, and Coastal Plain sections of the State, and the value of using legumes for improving the soils.

During the year 550 letters were written answering questions that came to this office relative to soils, crops, fertilization, pasture mixtures, and lime. As a great number of these letters require the looking up of results of field investigations, more time was used in this correspondence than would have been had the questions been simply of a general nature.

During the year conferences to the number of 75 were entered into. These conferences covered practically all of the subjects relative to agriculture, but the majority were related to fertilization and the growing of crops. During the year 652 miles were traveled by automobile and 7,700 by railway. The following articles were prepared and sent out to the newspapers: Sow Cover Crops this Fall; Last Call for the Sowing of Winter Cover Crops; Should Liming Generally be Practiced in North Carolina Agriculture?; Farmers May Make Their Soils More Productive by Growing More Organic Matter; Value of Cover Crops to Maintain Soil Fertility; Growing Cotton in North Carolina; Growing Cotton Under Boll Weevil Conditions; Cultivate Your Cotton Frequently; Growing Crops; The Use of Fertilizers for Cotton Under Boll Weevil Conditions; The Value of Sulphur on North Carolina Soils; The Use of Fertilizer on Growing Crops; and Proper Cultivation and Late Application of Fertilizer for Cotton.

The following lectures were given: Fertilization of Cotton; The Use of Legumes for Soil Improvement; and Methods of Testing Soil Acidity; Wheat and Oat Fertilization; Best Cover Crops to Use.

From the calls made for information at lectures and the attendance at the meetings, it is evident that the farmers of this State are seeking more information regarding the fertilization, rotating, and handling of soil and crops in order that they may increase the production of crops at a lower cost. They are beginning to realize that some method of selection is needed in the selection of plant food materials for the different crops and for the different types of soil. This seeking for explicit information relative to these things is, in my mind, caused by the active work being done throughout the State along agricultural lines by the extension workers of the soil fertility section of the Division of Agronomy.

CROP AND SOIL FERTILITY WORK

By E. C. BLAIR (wholly through county agents)

Number of meetings held	79
Total attendance at meetings	1,610
Average attendance at meetings	20
Number of farmers visited	300
Number field demonstrations started	38
Number field demonstrations now running	21
Number visits to demonstrations	80
Number fairs attended	5
Number of exhibits at fairs	3
Number people reached at fairs	3,000
Miles traveled by railway	8,478
Miles traveled by auto	3,319
Total number counties visited	30
Total number people reached directly	4,910

Boll Weevil and Other Agronomy Work by the Chief of the Division

Prepared 37 special and timely articles on farm problems. These were sent to newspapers of the State, county agents, and to teachers of agriculture in farm-life schools and in high schools of the State.

In closing this report, I wish to commend most heartily the fidelity to duty of each individual member of the working staff of the Division of Agronomy. Dr. Winters and his coworkers have actively pushed the extension work in crop improvement; Mr. Pate, in soil fertility; and Mr. Blair, in crop and soil fertility extension work with county agents.

Respectfully submitted,

C. B. WILLIAMS,
Chief, Division of Agronomy.

REPORT OF THE ANIMAL INDUSTRY DIVISION

To the Director:

The following reports of extension work by this division have been reduced to summaries in so far as possible. Because of the nature of the various lines of work, it is necessary in some cases to go into considerable detail.

OFFICE OF DAIRY EXTENSION

J. A. Arey, *In Charge*

CONSTRUCTION

During the past year a considerable part of this work has been referred to E. R. Raney, farm engineer. However, assistance and plans have been furnished a number of dairymen in building and remodeling dairy barns.

Nine dairy barns have been built new and remodeled into practical barns for producing clean milk. Fourteen concrete, stave, octagon, and wooden hoop silos have been constructed. Eight milk houses have been built new.

Plans and personal assistance have been furnished for erecting the following creameries: Caldwell Creamery, Lenoir, N. C.; Wilkes Cooperative Creamery, North Wilkesboro, N. C.; Alamance Coöperative Creamery, Burlington, N. C.

CHEESE FACTORY DEVELOPMENT

Twenty-four factories have received assistance from the cheese manufacturing specialists, Messrs. Farnham, Wilson, and Graham, during the fiscal year. The time of these men is supposed to be devoted entirely to manufacturing problems, but the price of cheese reached such a low mark in the early spring that they had to spread considerable time in holding meetings and making personal visits to farmers in order to stimulate sufficient interest so as to make it possible to open several of the smaller factories.

When the price which the factory can pay for milk goes below 10 cents per gallon, which was the case with a few of the factories in the early spring, it is very difficult to get a sufficient amount on which to operate, although this market condition may prevail only a short time.

These factories were organized during the period of the World War when an abnormally high cheese market prevailed. The decline in the cheese market since 1919 has brought a corresponding decline in dairy interest, and only 13 factories have operated throughout the year. Some of these, however, have manufactured more cheese, and cheese of a higher quality this year than during any previous year of their operations.

During the latter part of this summer the cheese market has advanced and the managers of several of the factories which did not operate this

summer have expressed a desire to open up early next spring, or as soon as the milk supply is sufficient to operate on.

Swiss Cheese Project

Due to the low market for American cheese, it was thought advisable to try out the manufacture of Swiss cheese, which usually sells for about twice the price of Cheddar. So, on September 14, E. V. Ellington, representing the Federal Department of Agriculture, Dairy Division, Messrs. Farnham, Wilson, and myself, held a conference at Asheville and decided to start the work in Cove Creek Cheese Factory, Watauga County. The Federal and State Departments of Agriculture entered into the project coöperatively.

A second-hand Swiss cheese outfit was located in Ohio by Mr. Farnham, and purchased by the State Department of Agriculture. Cold and warm curing rooms were built, and on December 2 the first Swiss cheese was made.

Twenty-three wheel Swiss, weighing 2,097 pounds, were made from December 2 to February 3. This lot of cheese filled the curing rooms, and at a conference of Messrs. S. C. Thompson, U. S. Department of Agriculture, Dairy Division, Farnham, Wilson, Graham, and Arey, it was decided to discontinue manufacturing Swiss cheese until those made could be ripened and marketed.

It was Mr. Thompson's desire that the work be carried on in an experimental way for twelve months before undertaking it on a commercial scale, due to the uncertainties connected with the manufacture of this type of cheese. At this conference it was decided that Mr. Wilson should supervise the ripening of the cheese, which required about four months.

The following is a condensed report of the financial outcome of the Swiss cheese work last year, during which time twenty-three cheese were made:

Total milk received (pounds)	25,950
Total amount received	$745.80
Received for milk and whey cream	111.00
Total	$856.80
Natural shrinkage	10.3%
Shrinkage, including spoiled cheese	13.0%

These cheese were sold to retail stores and hotels. The following shows the factory expense:

Salt	$11.60
Rennet	2.50
Seventeen tubs	17.00
Maker, 2 cents per pound cheese	41.94
Hauling cheese to station	6.98

Samples	3.20
Interest on $100 investment	6.00
Incidentals	16.50
Total expense	$105.72
To 3,017 gallons of milk at 20 cents	603.40
Total cost of cheese	$709.12
Total sales	856.80
Profit	147.68

All cheese, excepting one, graded No. 1. In standardizing milk for the first twenty cheese, slightly too much fat was removed, which gave a tough body. This was corrected, however, later. A mechanical stirrer, oil incubator, and sterilizer have been added to the equipment and the work resumed on September 11.

At the present time the work is not developed sufficiently to express an opinion concerning its final outcome. The results, however, are very encouraging. If it is demonstrated that Swiss cheese can be made under western North Carolina conditions, this will make it possible to obtain about twice the amount for the milk as when sold from making Cheddar cheese.

DAIRY SCHOOLS AND SPECIAL DAIRY MEETINGS

During the year forty-seven meetings, demonstrations, sales, dairy schools, and milk consumption campaigns have been held. There was a total of 5,503 people who attended these meetings.

The following is a summary of the meetings addressed by the various members of the office of dairy extension:

Number meetings addressed by Kimrey	79	Attendance 8,015
Number meetings addressed by Farnham	16	Attendance 2,129
Number meetings addressed by Graham	7	Attendance 282
Number meetings addressed by Wilson	9	Attendance 2,147
Number meetings addressed by Clevenger	20	Attendance 1,838
Number personal visits by Farnham	469	
Number personal visits by Graham	276	
Number personal visits by Wilson	550	
Number personal visits by Arey	200	
Number personal visits by Clevenger	224	

FAMILY COW PURCHASING

Mr. Kimrey has stressed the importance of the family cow in all eastern North Carolina meetings, but on account of the financial depression very little has been accomplished on this project. There is a growing demand, however, for family cows in eastern North Carolina, which will no doubt result in shipping several carloads of cows into that section this fall.

Eighteen high-grade Jersey heifers and one registered Jersey bull were purchased in Catawba County for Clarence Lytch of Laurinburg

and five registered cows at Boomer for Mr. A. C. Bowden of Hobgood, N. C.

BULL ASSOCIATIONS

Work has been done on four bull associations, but up to date all of these are incomplete. W. E. Wintermeyer of the Federal Department of Agriculture, assisted by the local county agent, spent most of August and September working on associations in Caldwell, Iredell, and Guilford counties.

Incomplete organizations were perfected in each county which can no doubt be completed in the near future. Two meetings were held at Dobson in Surry County for the purpose of perfecting a county Jersey breeders' association. A temporary organization was perfected and a constitution and by-laws adopted. A committee is now soliciting stock to be used in purchasing bulls.

MILK UTILIZATION

The dairy extension office coöperating with the Home Demonstration Division, has conducted three milk campaigns during the last fiscal year, one each at High Point and Greensboro during the week of February 20, and the third at Raleigh during the week of March 6.

Alamance farmers drink milk from Sandhill dairy.

The usual form of campaign was put on in each city with good results. Dairymen have reported an increased demand for milk ranging from 15 to as high as 25 per cent.

Such letters as the following have been received from prominent authorities in the State:

"It is very gratifying to the health department to know that the 'Milk for Health' campaign put on by your department in this city to increase the consumption of milk, and which we believe will result in much good, especially among the school population, was a great success.

"The interest manifested by the school children is certainly wonderfully expressed in the posters exhibited for prizes.

"From reports of dairymen we estimate already about 40 per cent increase in the consumption of milk. This is very gratifying to the department, as it will, we believe, stimulate the dairymen to put forth a greater effort to better their industry, which will mean the marketing of better milk."

FAIRS AND EXHIBITS

Exhibits have been put on at the following fairs and special meetings during the past year: Winston-Salem, Raleigh, Fayetteville, Greenville, Tarboro, Pinehurst, Wilson, Statesville, Elizabeth City.

The Winston-Salem exhibit consisted of a dairy products booth in which was displayed about forty cheese, representing several different types, including Daisies, Loafs, Long Horns, Midgets, and Wheel Swiss. There were also five entries of creamery butter and three of farm butter. A similar exhibit was made at the North Carolina State Fair.

In addition to the dairy products at the State Fair, a booth was installed showing the necessary equipment for producing and marketing sour cream. A bull association exhibition was also installed to emphasize the importance of using a purebred sire in grading up a herd. This latter exhibit consisted of Eminent 19th and six of his daughters, which had produced 35 per cent more butter-fat than their dams.

The dairy cattle exhibit at the State Fair was the largest in the history of the fair. This exhibit was largely due to the efforts put forth by the office of dairy extension. There were 230 head shown, divided among the different breeds as follows: Jerseys, 133; Ayreshires, 142; Holsteins, 39; and Guernseys, 16.

The exhibit at the Fayetteville fair consisted of equipment essential for the production and marketing of sour cream. Those at Greenville, Tarboro, Pinehurst, and Wilson were all family-cow exhibits. At the farmers' picnic held at Statesville, N. C., an exhibit was put on containing charts showing amount of feed consumed, production, cost of production, and profit of the Gold Medal Jersey cow owned by Mr. J. R. Lutz, of Newton, N. C. This exhibit attracted attention and received much favorable comment.

CREAMERY MANUFACTURING

Mr. W. L. Clevenger has direct supervision of this phase of the dairy extension work, which has progressed in a very satisfactory way during the year. Practically all of the creameries have had an increase in production, and are in good financial condition. The creamery butter

production in North Carolina increased in 1921 35.9 per cent over 1920.

Much constructive dairy extension work is being carried on, which is bringing about a healthy condition in dairying. The newness of dairying, its problems, and scarcity of home-trained men is becoming less noticeable. This is due to the fact that considerable attention and instruction has been given to the management of local creameries, milk plants, ice-cream factories, and their patrons. This work consists largely of giving advice concerning the organization of new creameries, selection of sites, plans for building, purchase of equipment, installation of machinery, supplying creamery records, securing desirable managers, butter makers and helpers, and answering inquiries that aid in making the plants more efficient.

The following tabulation shows the increase in the production of butter since 1917, in which year 988,744 pounds of butter were made. The following years produced: 1918, 852,239 pounds; 1919, 951,046 pounds; 1920, 989,713 pounds; 1921, 1,345,628 pounds.

Many calls have been received relative to organizing creameries in the eastern section of the State. In most cases it has been necessary to advise against this movement, as there were not sufficient cows to support a plant. In each instance cream shipping has been advised until such time is reached when sufficient butter-fat is being made to properly support a local plant.

OFFICIAL TESTING

During the past year 41 breeders have carried on semi-official testing. Eighteen supervisors have been provided to do this work, at a cost of $2,816.30 to the breeders. A news letter is issued each month which gives the names and owners of all cows producing forty or more pounds of butter-fat during the month. This letter also carries timely dairy news items, and, I feel, has done much good in bringing about a closer contact between the dairy extension office and our best breeders of dairy cattle.

GENERAL

During the year the office of dairy extension assisted in getting out a circular on judging livestock. Folder No. 5 was also printed, entitled "Cow Facts," which has been used quite extensively by banks over the State which were interested in assisting their farmer patrons in securing good cows. A calf club record book was also published which is being used by the calf club members. Nine newspaper articles have been written and published in a number of the State papers.

With the assistance of county agent Hendricks, a calf club consisting of 25 members was organized in Catawba County. Instruction is given the members on care of young calves and fitting and showing in the ring. Twenty head were shown at the Catawba County fair held at Hickory, and three members gave demonstrations with their calves at the State Fair. This club was organized on a three-year basis and is the only one

to receive the $75 permium offered by the American Jersey Cattle Club for the first thirty clubs reporting this year with a membership of twenty.

Sales

During the year assistance was given in conducting the following dairy cattle sales:

Summary

Breed	*No. Head*	*Time*	*Place*
Jersey	10	October	Shelby, N. C.
Jersey	50	November	Charlotte, N. C.
Guernsey	34	August	Linwood, N. C.

Miles traveled in auto and by rail, Arey	14,448
Miles traveled in auto and by rail, Graham	6,368
Miles traveled in auto and by rail, Wilson	5,823
Miles traveled in auto and by rail, Farnham	7,287
Letters written, Arey	1,872

OFFICE OF BEEF CATTLE EXTENSION

R. S. CURTIS, *In Charge*

For the past three years a beef cattle extension man has not been provided, but the writer has, with the assistance of F. T. Peden, stationed at Springdale, N. C., in beef cattle experimental work, been able to conduct some work. The following are the projects on which work is being conducted or completed:

FINISHING BEEF CATTLE

Realizing that it would be necessary to conduct some work in the boll weevil areas for the purpose of showing farmers how they could best finish and dispose of their cattle, a project was started on the farm of L. M. Buck at Scotland Neck, N. C. This particular piece of work has been looked after largely by Mr. George Evans in the sheep field office.

This work consists of growing out young cattle and forcing them for the market at 20 to 24 months of age. At the present time two carloads of young cattle are being finished for the market next July. These calves will be fed through the winter and finished on grass with grain to supplement the ration. The cattle work in eastern North Carolina is distinctly different from the industry in the western part of the State, inasmuch as in this latter section cattle are grazed through the summer and roughed through the winter, and sold off grass with no grain in the fall.

In eastern North Carolina it will be necessary to work out a supplementary ration, and this is the plan on which we are working on the farm above mentioned.

SALES OF BEEF CATTLE

During the year assistance was given in conducting the following beef cattle sales:

Breed	*No. Head*	*Time*	*Place*
Herefords	20	October 8	Fairview, N. C.
Herefords	10	May 1	Burnsville, N. C.
Herefords	20	November 10	Asheville, N. C.

F. T. Peden, who was largely instrumental in making these sales a success, helped also in the swine sale at Asheville on August 17, when 40 hogs were sold at an average of $30 per head. The attendance at this sale was 350.

ORGANIZING LIVESTOCK ASSOCIATIONS

This office attended ten different meetings at Canton, helping to organize the Pigeon Valley Pedigreed Seed and Livestock Company. This company was formed by the owners of six of the best farms in Haywood County.

MEETINGS ATTENDED

For the purpose of keeping in touch with the work being done on beef cattle in the Southern States, Mr. Peden attended the Southern Cattlemen's Convention at Knoxville, Tenn., on February 14, 15, and 16. He also attended the annual meeting at the Swannanoa Test Farm on August 17, acted as superintendent of beef cattle at the State Fair, and had charge of the beef animals on exhibition at the livestock meeting at Statesville on November 22, 23, and 24.

LAND CLEARING

During the time the beef cattle feeding work has been in progress at Springdale, which covers a period of nine years, numerous questions have arisen concerning the cost of clearing this rough mountain land, seeding it to pasture, and making it ready for the successful handling of livestock. In order that this might be definitely worked out, Mr. Peden is spending about half of his time from October 1, 1922, to April 1, 1923, in getting cost data on the clearing of the above land.

When this project is closed, figures will be available so that a circular can be issued giving prospective livestock growers in this section a clear conception of the amount of work and cost for putting such land in shape for cattle. At the close of this work Mr. Peden will devote his full time to beef cattle extension projects in the eastern part of the State, and more particularly in the boll weevil infested sections.

MISCELLANEOUS

A large number of letters and circulars have been sent out for the purpose of placing the beef cattle work before the stock men of the State. Where possible, this has been supplemented with personal calls for the purpose of giving help along these lines.

OFFICE OF SHEEP EXTENSION

GEORGE EVANS, *In Charge*

The work of the sheep field office has been unusually satisfactory during the past year, as farmers of the State are becoming much more interested in the production of sheep. This is largely due to the fact that sheep and wool prices have been steadily advancing until now both of these products are bringing good prices.

The following are the projects:

DEMONSTRATIONS

Forty-six demonstrations have been held in sheep shearing, wool tying, docking, and castrating. At these demonstrations 164 sheep were sheared, 388 lambs docked and castrated, and 493 people in attendance. After the necessary instruction has been given and a demonstration made, these operations are largely performed by those in attendance. This is for the purpose of giving them real practice along these lines.

Six culling demonstrations were held, during which six flocks were culled and detailed information given on how to go over a flock and select the ewes most serviceable for breeding. Forty-four people attended these demonstrations. This work is done largely in the same manner which Messrs. Kaupp and Oliver show the good and bad points of hens in their poultry work.

FARM FLOCK DEMONSTRATIONS

Five farm flock demonstrations were started during the year. These demonstrations are for the purpose of drawing a comparison between a good flock of sheep properly managed and an inferior flock improperly managed. Cost records are kept on feeds, labor, service, pastures, and plowing and seeding of land. At the close of the year a complete record is available, thus showing the income and outgo from the flock.

It is the intention to develop these demonstrations in various sections of the State inasmuch as conditions vary widely, thus making it necessary to obtain figures depending upon the conditions existing in the section of the State in question.

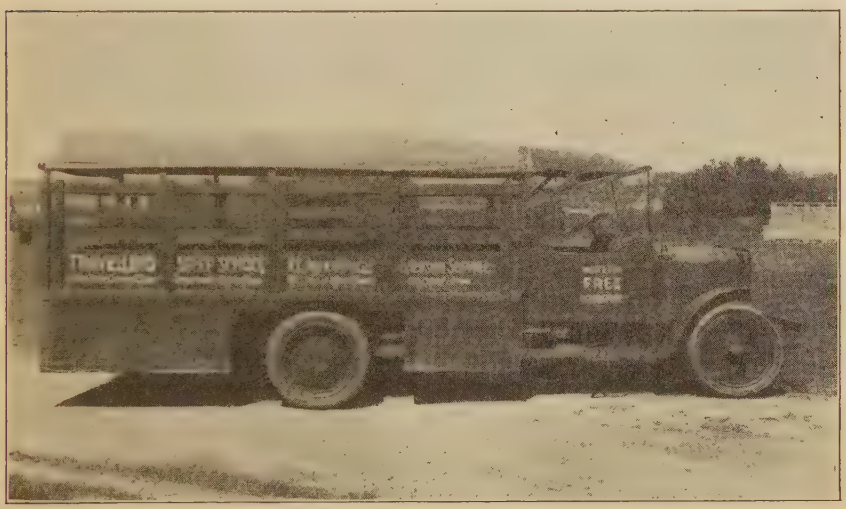
PLACING PUREBRED ANIMALS

During the year 36 purebred rams have been placed, 24 purebred ewes, and 100 grade ewes. It will be noted that the number of rams placed is in excess of the number of ewes. This is due to the fact that in developing the sheep industry, like other lines of livestock work, we are strongly advocating good sires, and the use of native foundation animals for the most part.

SHEEP TRUCK EXHIBITS

This truck, which was fitted up for use last year for the purpose of extending the sheep work in the remote parts of the State, has proved unusually successful. Eight purebred sheep are carried in the truck, four rams and four ewes, representing Shropshires, Hampshires, Southdowns, and Dorsets.

In addition, all necessary equipment for holding sheep-shearing and wool-tying demonstrations are carried. Likewise, docking and castrating instruments, an exhibit showing wool grades, and the various processes of wool manufacturing.



Putting sheep on map in North Carolina.

This exhibit has been made at the North Carolina State Fair and at the following county fairs and meetings: Tarboro, Scotland Neck, Wilson, New Bern, Ashboro, Leicester, Columbus, Sunny View, Tryon, Hickory, Statesville, Fairview, Gastonia, Avery's Creek, Hominy Valley, Mill Spring, Green's Creek.

WOOL MARKETING

The sheep field office assisted the Division of Markets in marketing lambs and calves, and helped in arranging wool pools in 15 different counties, in which 43,898 pounds of wool was marketed at a price approximately ten cents above what the average country buyer was offering for wool at the time.

All told, about one month was devoted to this work, which is considered very valuable inasmuch as it brings the farmers and stock men interested in sheep in direct contact with the production work. These

wool pools are especially valuable, too, in that the farmers have an opportunity to see the wool graded and sold, and receive their money before it is even shipped away. The educational value is unique, and it is the plan to proceed with this work on a similar basis in future years.

In some of the larger wool-producing states, where the wool has been shipped to centralizing points, the results secured have not been so satisfactory.

CONSTRUCTION

This covers the necessary instruction to teach farmers how to build modern, inexpensive sheep barns, hay racks, and grain troughs, lamb creeps, hurdles, fences, and other necessary equipment on the sheep farm.

This work has been extended from a small way to the construction of an entirely new barn on 130 farms where personal visits were made. Information and aid has also been given in the construction of silos.

Summary

The following figures represent the total activities of this office:

Miles traveled on train	5,990
Miles traveled by auto and truck	3,858
Letters written	1,236
Personal visits	130
Demonstrations in fitting and trimming	1
Assisted in wool pools	15
Sheep sheared	164
Lambs docked and castrated	388
Culling demonstrations held	6
Farm flock demonstrations made	5
Meetings attended (special)	8
Purebred rams placed	36
Purebred ewes placed	24
Grade ewes placed	100
Fairs visited by truck	17
Beef cattle feeding demonstrations	1
Demonstrations on shearing and wool tying	46

OFFICE OF POULTRY EXTENSION

ALLEN G. OLIVER, *In Charge*

The following is the principal work accomplished by the poultry office:

Proper housing and home-made equipment for care of farm poultry.

Furnishing models and blue-prints.

Early hatching and keeping of all early-hatched pullets.

Feeding mature birds for fall and winter egg production.

Feeding of young growing birds so that they reach maturity in the shortest possible time.

Candling and grading eggs for market.

Finishing young cockerels by milk feed wherever possible before shipping to market.

Exhibit of purebred farm poultry raised by farm boys and girls at various fairs throughout the State.

Holding culling and judging schools on farms.

Assisting in organization of poultry associations in many counties.

Purchasing of poultry feeds and shipping coöperatively.

Boys' and girls' poultry clubs sold over 40,000 purebred eggs for hatching purposes.

Holding educational exhibits at various places.

Practical demonstrations in many counties.

Since the advent of the boll weevil the poultry work has developed in an unusual manner. Because of the large number of people affected, it has become, under certain conditions, almost unwieldy. It is only necessary to say that because of the expansion of this work a second poultry worker has been added in order that the situation might be properly handled.

The following is a summary of work performed by this office:

TOTALS

Miles by rail	10,370
Miles by auto	4,380
Number letters written	1,563
Number homes visited	394
Number farms visited	394
Demonstrations	704
Meetings	942
Attendance	14,275
Community fairs	1
Number other fairs and shows	5
Number members showing	425
Number birds shown	1,797
Cash won	$1,388.50
Poultry houses (new)	54
Poultry houses (remodeled)	19
Conferences	50
Local articles for press	24
Flocks culled	188
Number dozen eggs shown	319
Judging contests	3
Educational exhibits	12
Lectures	241

OFFICE OF SWINE EXTENSION

W. W. SHAY, *In Charge*

The entire activities of this office, with the assistance of J. W. Watts, has been given over to feeding demonstrations as outlined in the projects below:

FEEDING DEMONSTRATIONS

This work is all done in coöperation with the county agents. This is considered the first requisite to satisfactorily work out the feeding schedules, do the actual feeding work, and get accurate reports. Wherever the county agents have thrown themselves into this work actively, good results have been obtained.

This work has been started in 18 counties up to date. In each case where reports have been received a profit has been shown. This particular part of the work is done in coöperation with V. W. Lewis of the Division of Markets, and it is very gratifying to know that Mr. Lewis has succeeded in getting a premium of $1 per hundred pounds for all hogs fed after the demonstration plan. This amounts to approximately $150 in the case of a carload.

During the year considerable time has been spent in working up a system of records which will enable the specialist to follow up each particular demonstration under way. There is no doubt but that the greatest service that can be given farmers is to teach them whereby they can really secure a profit from their herds. No other method seems to bring these results as well as the concrete feeding demonstrations.

Self-feeder and Colony Hog House, built on farm of R. P. Britt, Columbus County.

Large numbers of letters are coming to the office requesting information on how to properly care for, feed, and manage brood sows, on which depends the supply of feeder hogs used in this work. It is recognized that one of the chief troubles to overcome in finishing hogs for market is the softening effect of such feeds as peanuts, soybeans, and chufas. This is being given much time in the field in the extension problems in addition to the constructive work which is being done by the experimental workers.

The following is a complete summary of the work performed during the year:

Condensed Report of Travel and Activities of the Office of Swine Extension, State College Station, Raleigh, N. C.

(FOR THE FISCAL YEAR ENDING SEPTEMBER 30, 1922)

Month, 1921-1922	Travel			Feeding Demonstrations Started	Visits to—		Letters Written	Meetings		Articles Written	Copy for Charts, Blotters, Forms, and Bulletins
	Rail	Auto	Total		Agents	Demonstrations		Number	Attendance		
October	104		104				118			5	Copy for Chart
November	500	20	520	1	3	4	72	1	30	3	1 and 10-Year Average
December	1,081	167	1,248	13	5	7	98	2	210	2	Feeding Schedules
January	641	360	1,001	16	5	9	146	10	295		Feeding Schedules
February	914	62	976	18	3	8	141	2	130	2	Circular Letters 2
March	748	377	1,125	2	22	9	125	22	2,560	2	Five Analyses of Results
April	1,032	131	1,163	8	7	12	178	3	133	2	Circular Letter Bankers
May	184	190	374	9	2	2	202	1	57	1	Analysis of Results
June	1,578	605	2,183	14	8	26	351			4	Circular Letters 5
July	1,948	265	2,213	10	6	11	285	3	6,020	3	Bulletin
August	2,339	471	2,810	2	5	4	74	4	50	4	Secy. Farmers' Convention
September	1,298	438	1,736	4	9	8	234	2	172	3	Forms 1 to 17
Totals	12,367	3,086	15,453	97	75	100	2,024	50	9,657	31	

The extension phases of the work are being built on broad, substantial lines. All of the work which is now in progress is fundamental, and really comes nearer reaching those in need of the work than ever before. This is due, largely, to the splendid coöperation which is being received from the various county agents in this State. There is no doubt but that a better understanding is being reached in conducting the field work through the main coöperating agencies under the county agent system.

Plans are already under way to map out a good program along the most needed lines during the coming year. This will be embraced in reports of the projects which will be explained and plans otherwise fully made at the coming meeting of the county agents next month.

Generally speaking, all unimportant or ineffective phases of extension work are being eliminated and replaced by broad lines of specific work which really reach the people. This may be well illustrated by the specific feeding demonstrations which are being carried on by the swine extension office, the work which is being done by the use of the sheep extension truck, enabling this office to carry a complete line of equipment, and the culling and marketing demonstrations being carried on by the poultry extension office.

Respectfully submitted,

R. S. CURTIS,

Acting Chief, Animal Industry Division.

REPORT OF THE DIVISION OF ENTOMOLOGY

To the Director:

I submit herewith a report of the extension work conducted by the Division of Entomology for the year ending June 30, 1922.

General Economic Entomology

W. B. Mabee

In former reports we have given an account of work in control of orchard insects, potato spraying demonstrations, control of weevils in stored grains, and other subjects. During 1922 a few demonstrations have been given in the fumigation of corn to control weevils, and there has been some scouting work to determine the spread of bean beetle, but by far the greater part of the time has been devoted to boll weevil problems, in accord with suggestions of the Director. We greatly regret the necessity of curtailing other work on this account, for we know full well that in other lines of extension (as in potato spraying, for example) we have a sound basis of experimental findings which, if taught to *and adopted by* our commercial potato growers, would add many thousands of dollars to the agricultural income of our farmers.

During the year Mr. Mabee visited 64 county agents and held 60 meetings and demonstrations with an attendance of 3,246 persons, traveling a total of over 10,000 miles by actual record. Over a dozen news articles were also written by Mr. Mabee, and an extension circular published on "Control of Peach Insects."

Boll Weevil Work

W. B. Mabee, F. Sherman

During February and March a series of 12 county-wide meetings arranged by ourselves was held in our southern counties, and this was supplemented by attendance at many other meetings arranged by others during the season.

In May Mr. Mabee located at Laurel Hill, Scotland County, for the season.

In July Mr. Sherman located at Wadesboro in Anson County for a period of six weeks.

During the season we undertook to guide aright all farmers who were prepared to follow the standard dust-poison method to control boll weevil, and to extend all possible help and advice to others. Dusting was undertaken, to our knowledge, in the counties of Union, Anson, Richmond, Scotland, and Bladen, but more in Scotland than in any other. Our inquiries reveal that about 50 dusting machines were used for dusting cotton, and that a total of about 56 tons of calcium arsenate

was used. We calculate that a total of around 3,700 acres of cotton was dusted, of which about 1,600 acres was in Scotland County. During the season 10 timely letters of advice were issued.

We are now (November-December, 1922) receiving reports from growers, many of whom did not conduct accurate check-plat demonstrations. While some were deterred from dusting by the frequent rains, the majority of those who persisted in spite of rains express conviction that the work paid well.

Mr. Mabee was able to carefully follow the work to conclusion on five farms in Scotland County, while R. K. Craven, county agent in Bladen, kept records of work on some cotton of his own and has given his figures.

As a result of this work we present the following condensed table:

COTTON DUSTING DEMONSTRATIONS TO CONTROL BOLL WEEVIL, 1922

ALL FIGURES ON BASIS OF ONE ACRE

NAME	Times Dusted	Yield Seed Cotton per Acre, Pounds		Gain Seed Cotton per Acre, Pounds	Value of Gain per Acre	Cost of Dusting per Acre for Season	Net Gain per Acre by Dusting
		Dusted	Not Dusted				
Z. V. Pate	6	1,883	1,481	402	$ 54.06	$ 7.00	$ 47.06
J. N. Gibson	4	1,311	1,054	257	21.42	2.88	18.54
W. N. McKenzie	5	1,612	1,464	148	12.47	4.75	7.72
McL. Gibson	5	1,845	1,468	377	31.41	4.13	27.29
J. C. Hunsucker	3	1,913	1,705	208	17.47	3.50	13.97
R. K. Craven, Bladen County	6	1,000	500	500	41.74	7.00	34.74
Average for six cases	5	1,597	1,269	328	29.76	4.88	24.88

Remarks

Mr. Pate's cotton was long staple, figured at 30 cents per pound; all the rest was short staple, figured at 21 cents per pound; all seed figured at 60 cents per bushel.

The "cost" is figured to include labor, poison, and estimated depreciation of machines.

While the result was profitable in every case, there is considerable variation. In the case of lowest profit (McKenzie), the undusted plat made a very good yield (as in others, also), which suggests that the weevil infestation may not have been as severe as it may be in some future years.

The greatest difference in yield (Craven) was in Bladen County, which is farther east, lower elevation, etc., where we would expect infestation to be more severe.

In the Scotland County work (first five listed) the earliest dusting was on July 18, and the latest dusting was about August 18.

Other details are included in our records.

At the time of preparing this report there comes to hand Bulletin 165 of the Florida Experiment Station, which describes an important modification and simplification of the dust-poison method heretofore used.

While this has not yet been proven outside of Florida, there seems to be no reason, on theoretical grounds at least, why it might not be valuable here, also, and we are planning to test it during 1923.

Thus, at the same time that we have thoroughly proven the efficiency and profit of the dust method, there appears a modification which may make it more simple and more widely available. Surely good progress is being made toward a genuine solution of the boll weevil problem, yet all public workers are painfully aware that it takes time and patience to get any new method fully engrafted into general practice.

Beekeeping Extension

C. L. SAMS

In this work 126 meetings and demonstrations were held during the year, with an attendance of 2,296; of apiary visits and personal assistance, 602, making a total of 2,898 persons given instruction during the year. Over 11,000 miles were traveled.

The subjects have been: (1) behavior and management of bees; (2) disease control; (3) requeening and queen rearing; (4) transferring; (5) preparation for winter; (6) spring management; (7) swarm control; and many other subjects pertaining to modern bee culture.

While this work reaches into many counties in all sections of the State, there were sixteen counties which called for more than an average of attention, these extending from New Hanover and Perquimans in the east, and to Madison and Buncombe in the west.

In a demonstration in Johnston County two colonies, transferred to modern hives, made 240 pounds surplus honey, valued at $60, while five other colonies left in the common "box" hives produced no surplus honey.

In Jones County, in a yard of 150 colonies in box hives, one colony was transferred to a modern hive, and although it was too late for best results, this colony made 50 pounds surplus honey, while no surplus (or very little) was realized from all the rest of the yard.

In a Davidson County apiary a colony yielded 112 pounds surplus honey. The owner averaged around 100 pounds each from 40 colonies, and attributed his success largely to methods learned from this beekeeping extension work.

Respectfully submitted,

FRANKLIN SHERMAN,
Chief in Entomology.

REPORT OF DIVISION OF HORTICULTURE

To the Director:

The greatest interest in both commercial and home horticulture that has ever existed in the State has resulted from the operation of existing agricultural conditions in the State and conditions in horticultural industries, which include the general economic need for diversification, boll weevil conditions, and a realization of the advantages of the State for different horticultural crops.

This increased interest has resulted in the largest demand ever made on the Division of Horticulture for extension activities. There are more opportunities for service in this phase of the horticultural field than ever before. This is evidenced by the fact that the correspondence has doubled in eighteen months, due to direct inquiries for information, and that more consultations and conferences are solicited than can be met.

The success of the extension work in a state depends upon determining the real problems of horticulture, the soundness of principle on which the work is conducted, and the degree of efficiency developed in presenting the demonstration and the extent to which the practice demonstrated is actually adopted in the community.

An earnest effort has been made to determine the most important problems in horticulture in the State, so that the horticultural extension work could be organized on a logical basis, and the maximum amount of service could be performed. A logical and well balanced program of extension work is based upon problems of both commercial horticultural crops and those of home importance. A close study of the horticultural development and possibilities of the State has been made to determine the commercial and home problems.

The most important commercial horticultural industries in the State are those of the sweet potato industry in the Coastal Plain and Piedmont sections of the State, the early Irish potato industry in the Coastal Plain, the apple industry in the Mountain section, the late Irish potato industry in this same section, and the peach industry in the Sandhills. From a home standpoint, home gardens, home orchards, and home beautification are the most important phases.

The commercial interests of the State have been studied from the viewpoint of the problems of existing industries, and from the standpoint of the developing of new industries for which the certain sections of the State have special, natural and economic advantages. Similar study has been made with the home aspects of horticultural extension.

Some of the more important problems with reference to the horticultural development as outlined above are:

(1) More thorough pruning and spraying in commercial orchards.

(2) More home orchards and more careful attention to home orchards on North Carolina farms.

(3) Home gardens for both rural and urban families.

(4) A better distribution of the sweet potato crop through the use of storage houses.

(5) Improved cultural practices in both sweet and Irish potato production.

(6) The need of closer association among growers and the development of organization in handling their business rather than the development of the individual system.

(7) More attention to beautification of the home grounds.

A definite and logical program for horticultural extension, combining definite objects to be accomplished with definite plans of work, has been developed on the project basis so that these problems could be met. The program is divided into commercial and home phases, and is composed of the following projects:

Commercial Fruit Projects

(1) *General Demonstration Work in Pruning and Spraying.* General demonstrations in pruning and spraying in coöperation with the county agent, conducted in young orchards, mature orchards, and old orchards. Agent to select orchards, provide pump and material, advertise date, and secure crowd.

(2) *Orchard Plat Demonstration in Pruning and Spraying.* Three plats in commercial orchards are used, showing the value of pruning and spraying. Orchards must be located in good apple-producing counties, with typical orchard for the section, near good roads, more or less contiguous to other orchards, with problems of the section. On a cooperative basis with county agent and owner. Three-year basis for operation, maximum of eight meetings a year. Accurate records to be kept on cost and effectiveness.

(3) *North Carolina Apple Show and Fruit Growers Conference.* An apple show to stimulate the development of the apple industry, together with a program to supply information to growers so that the best orchard practices may become more generally employed. Coöperation with the county agent in selection, packing, and exhibiting fruit from the different apple counties.

(4) *Consultation Work in Orcharding.* Consultations with county agents and commercial orchard owners on special and individual problems.

Truck Projects

(5) *Sweet Potato Industry—Storage.*—In coöperation with county agents and progressive organizations, meetings to stimulate interest, information on varieties, production methods, harvesting, curing, and storage, showing model house, follow up.

Demonstrations in harvesting, grading, handling, and operation of storage house. Plans of house construction, rules for operation, points

of caution and care, news articles, bulletins. Consultations on construction of large houses, with assistance in operation. Confined to counties suitable to commercial production.

(6) *Irish Potato Seed Certification.* In coöperation with county agents and coöperative seed potato growers' organizations, certification service of three field inspections, and one bin inspection with rules of seed production supplemented by demonstrations.

(7) *Consultation Work in Truck Growing.* Consultations with county agents and commercial truck growers on special problems.

Home Fruit Projects

(8) *General Demonstration Work in Pruning and Spraying.* General demonstrations in pruning and spraying in coöperation with the county agent, conducted in young orchards, mature orchards, and old orchards. Agent to select orchards, provide pump and material, advertise date, and secure crowd.

(9) *Demonstration Home Orchards.* In coöperation with county agent, featuring this project. Visits made, demonstrations in pruning, spraying, and management given.

Truck Projects

(10) *Home Garden.* Organization of rural and city garden clubs, under direction of county agent and home demonstration agent. Plans and records on request. Bulletins, circulars, press stories, and general information. Demonstration gardens.

In the organization of demonstration work, it has been found that the definite project plan and program basis is the most satisfactory system. A descriptive list of horticultural extension projects is sent to each county agent so that he can select, to include in his plan of work for the coming year, those projects best meeting the needs of his county. At the county agent conferences of the different districts the scope of the different projects is explained in detail, as is the manner of conducting them. The agents submit their program for horticultural work to the specialists and a coöperative program between the agents and specialists is worked out and any readjustments necessary are made, so that a definite year's work is planned with certain objective points and methods of attack fully outlined.

The general tendency in the past has been to take care of miscellaneous requests for demonstrations that have been made by county agents and others. While some good has come from this scattering type of work, effectiveness has been weakened by lack of concentration and organization. Although it will always be necessary to meet some requests for general demonstrations, we are anxious to concentrate and confine our efforts to definite organized work, and are trying to discourage this isolated type of meetings or demonstrations. The work is planned to

reach groups rather than individuals. This plan has brought about closer working arrangements between the county agents and extension workers. The division relies on the county agents to work up county and community groups for the different projects. The work of the division is conducted largely through county agents, home demonstration agents, boards of trade, fairs, fruit shows, and different local agencies. Extensive use is made of the daily press, circular letters and circulars in aiding campaigns and in the dissemination of information.

We have found in our work that a well executed and explained demonstration is of far greater value than a lecture. The subject-matter taught by the demonstration should be slightly in advance of the time that it is to be used. For example, pruning demonstrations are given in late fall or early winter when the growers attending will have an opportunity to practice what they have learned. It is important that there be a close understanding between all men of the department and unity of ideas regarding subject-matter. Extension work may be rendered almost valueless in a given section by two men from the same division advocating widely different practices or methods. Unity of teaching can be secured by frequent informal conferences to consider subject-matter and departmental recommendations regarding it. In all the different projects, efforts have been made by the specialists to train county and home agents in the different phases of work as well as to reach the different communities.

A statistical report of the work shows 179 visits to agents and 309 visits to others, 164 meetings conducted with a total attendance of 11,804, travel by rail, 16,332 miles, and by auto, 4,741 miles.

Apple Work

In November, 1921, a county agent's school and conference was held at Asheville for the agents of the mountain district, at which all phases of the development of the apple industry were discussed.

The division has been instrumental in securing for western North Carolina, through agricultural papers of country-wide importance, a large amount of valuable advertising of its advantages for apple production. Only recently it was able to have the section written up in the *Country Gentleman,* issue of May 20. The Asheville Chamber of Commerce has secured 10,000 copies of this article for distribution out of the State. Such articles are of unlimited value in focusing attention on the advantages of western North Carolina for apple production.

Pruning and spraying are the two productive practices that are the limiting factors in apple production in North Carolina. Definite projects and definite demonstrations with pruning and spraying have been conducted by the county agents in the principle orchard sections. A statistical summary of the work of these projects shows 26 visits to agents, 53 visits to others, 56 meetings held, with a total attendance of 1,476 people, 156 miles traveled by auto, and 1,663 miles by rail.

Peach Work

The extension horticulturist coöperated with the Hamlet Chamber of Commerce in conducting the first Sandhills Peach Show. An extensive educational program, under the direction of the extension horticulturist, was given at this meeting, at which there were over 1,000 farmers and peach growers.

General Fruit

General demonstrations with pruning and spraying and the home orchard were held throughout the State. A statistical summary of this work shows 28 visits to agents, 43 visits to others, 35 meetings with attendance of 1,087, 563 miles traveled by auto, and 5,464 miles by rail.

Sweet Potato Industry

The progress in sweet potato storage and in the sweet potato industry is one of the outstanding pieces of work in the division. More assistance has been given to this industry than in any previous year. Approximately 250 plans were distributed during the year. Storage capacity in the State has been increased to over 600,000 bushels. The division has established a State-wide policy for the development of the sweet potato industry in the State, which will steer it to a sound development with a minimum risk of failure. The coöperation of all important agencies has been secured in the execution of this policy.

A sweet potato school for county agents was conducted at Rocky Mount, with a program of practical talks and demonstrations, which has since proved its value to the counties whose agents attended.

Counties which have become infested with the boll weevil have been advised to grow slowly into the commercial sweet potato business, while every community and town has been urged to build storage houses to supply its local demands as a strictly conservation measure.

The organization of local associations of sweet potato growers to construct storage houses and to market their potatoes has been conducted in coöperation with the Division of Markets.

Superior seed strains of the Porto Rico and Nancy Hall varieties which have been developed at the Pender farm are being used in seed development work in coöperation with fourteen county agents. This work will supply the commercial industry with standard, high productive, disease-free seed, something that has retarded the proper development of the industry in the past.

Home Garden Work

Of far-reaching importance was the work with the home garden project, in which efforts were successfully made to increase the number and quality of home and farm gardens and to emphasize the value of the "all-year" garden. A garden specialist was secured to conduct this work, and three garden bulletins were published.

Both the county and home agents have been developing the work in their counties. Much interest in home gardening was developed as the result of Governor Morrison's "live-at-home" campaign. The garden work has been conducted with the economic, thrift, social, educational, and public health phases emphasized. When it is realized that vegetables are essentially necessary in the diet if the highest mental and physical efficiency is to be maintained, and that it has been estimated that approximately 1,000,000 people in the State have their mental and physical efficiency impaired because of the lack of fresh vegetables, the vast importance of home gardens will be fully realized.

Demonstration Home Orchards

It has been the plan of this work to plant one or more one-acre demonstration home orchards in each county to encourage the planting of home orchards on the farm.

Demonstration orchards have been located in coöperation with the county agents and under their supervision. The plantings have been composed of varieties found by the Division of Horticulture to be most desirable for the different sections of the State.

During the last four years, nearly 150 of these orchards have been planted. A majority of the orchards have developed very satisfactorily, while a few have been decidedly unsatisfactory. The degree of success of the orchards has been in proportion to the amount of attention given them in almost every case.

These orchards are to be used by the extension workers of the Division of Horticulture for demonstration purposes so far as it may be possible.

General Truck Work

This work included work on commercial truck crops. A statistical summary shows 4 visits to agents, 5 visits to others, 4 meetings, attendance 250, 74 miles traveled by auto, and 47 by rail.

During the year Mr. Frank E. McCall was appointed to the position of garden and home beautification specialist. Mr. W. W. Magill, extension horticulturist, resigned to accept a similar position at the Kentucky University. This position was filled by the appointment of Mr. R. F. Payne.

Respectfully submitted,

C. D. MATTHEWS,

Chief, Division of Horticulture.

REPORT OF THE DIVISION OF MARKETS AND RURAL ORGANIZATION

To the Director:

This report is for the year ending December 1, 1922, and covers the extension work of the Division of Markets and Rural Organization of the State College and Department of Agriculture in coöperation with the United States Department of Agriculture under the agreement and plans entered into by these institutions for the conduct of all agricultural work of this kind in the State.

State Warehouse System

The State Warehouse System has undergone considerable development instant to the progress of coöperative marketing. The system has grown from thirty-two warehouses last year, having an aggregate capacity of 49,050 bales, to seventy-eight warehouses, having a total capacity of 212,620 bales.

Of course, this growth has meant considerable expansion of the force handling the State Warehouse System; this force having now been increased to one bookkeeper, three clerks in charge of insurance records, one stenographer, and three clerks in charge of files and signing of receipts. These employees are in addition to the State Warehouse Superintendent.

The State Warehouse System has undergone considerable development direct supervision of the operation of the warehouses, making constant checks of their affairs; but the office also carries and issues from time to time all supplies in the way of receipts, tags, and report forms.

All cotton stored in State warehouses is insured by the State Warehouse Superintendent, this insurance being figured from this office and carried in such manner as to effect very large savings in cost of insurance to the people of the State.

During the past five months the office has been directed by J. M. Workman, who has been acting as State Warehouse Superintendent in the absence of B. F. Brown, the duly elected superintendent, with the permission of the Board of Agriculture, has been devoting his attention to the coöperative marketing association for a limited time.

Cotton Classing

P. H. Hart, specialist in cotton classing, reports that during the season, September, 1921, to September, 1922, the number of bales of cotton classed by our offices was as follows:

Fayetteville	5,468 bales
New Bern	8,883 bales
Wadesboro	7,911 bales
Greenville	3,309 bales
Windsor (closed February 1, 1921)	3,150 bales
Raleigh	7,236 bales

There was little demand for cotton classing offices for the 1922-23 season because of the organization of the coöperative marketing association with its 30,000 members in North Carolina. Only two offices, therefore, have been operating outside of Raleigh. The New Bern office from September to December 1st has classed 2,709 bales, and the Fayetteville office, 9,348 bales for the same period.

Through a coöperative arrangement, the cotton association is now furnishing ideal quarters for the classing work, and all cotton samples submitted, regardless of whether the owners are members of the association, are classed in the same room by the same classers. At present there are eight classers and five helpers busily engaged in this work, but five of these classers are engaged for only the rush season. During September, October, and November a total of 74,000 bales have been classed for the association and 5,872 for nonmembers. This makes a total of 114,638 bales classed during the past fiscal year, December 1, 1921, to December 1, 1922.

Warehouse Construction

During 1921 the numerous inquiries received from all over the State indicated that interest in cotton warehouse developments was active even though construction projects were held back by reason of financial stringency and later rise in the price of cotton. By reason of this situation and the merely formative stage of the marketing association, the services of our engineer, J. M. Workman, were directed largely toward a survey of the State aimed to determine the actual and relative advantages of 300 towns as marketing and storage centers for cotton. This study is designed as a guide to the marketing association and to the most intelligent application of the State aid and loan funds. It takes into consideration existing trade connections, variety, and density of cotton production and its distribution, highways, and transportation facilities, financial instructions, and fire protection ratings. It is recognized that development is intelligent and truly economical production must reinforce all marketing accomplishments.

The two warehouses that were constructed in 1921 were at Kings Mountain and Dunn. They had an aggregate capacity of 10,000 bales. Both were constructed with the aid of the State loans and in accordance with plans engineered by the Division of Markets.

During the past year there has been an increase in the interest evidenced in the cotton storage business and a number of warehouses have been constructed. The warehouse department engineer has furnished plans for the construction of warehouses at Goldsboro, Norlina, Fayetteville, and Raeford, having an aggregate capacity of 26,000 bales. These warehouses are now nearing completion.

The work of supplying engineering services has been conducted by J. M. Workman, warehouse engineer, who has also concluded the preparation of the economic storage survey designed to determine the most

economical development of storage facilities in the State. This work, however, has been carried on to a lesser degree by reason of the fact that for the past five months Mr. Workman has been serving as State Warehouse Superintendent.

Warehouse Organization

T. B. Parker has had charge of the organization work in connection with warehouse construction. On account of financial conditions, the year 1921 was one of little activity in warehouse work. The past year has seen improved conditions by the uncertainty as to the steps the Cotton Growers' Coöperative Association would take in regard to cotton storage warehouse which held the work in abeyance for a considerable time.

During 1922 Mr. Parker has visited a number of places in the interest of improved warehousing facilities. Among these are the following: Nashville, Whitakers, Conetoe, Benson, Norlina, Warrenton, Warren Plains, Raeford, Stantonsburg, China Grove, Salisbury, Kelford, Scotland Neck, Mount Olive, Goldsboro, Kinston, Greenville, Farmville, Macclesfield, Pinetops, Weldon, Cleveland, Mount Gould, and Seaboard. He was called to Tryon, where steps were taken to get into coöperative dairying; to Pittsboro, Rutherfordton, Elm City, and Poplar Grove, and also appeared on the program at the district county agents' conference at Wilmington and Statesville.

Livestock

Because we have been without the services of a specialist in marketing livestock, the report on this phase of our work is limited to the period since Mr. V. W. Lewis has been connected with the Division of Markets in this capacity. There are so many projects in livestock work deserving immediate attention that it is impossible for the one specialist to take care of the needs properly.

After the war the obligations the farmers had to meet caused many herds and flocks to be sacrificed. In many cases the younger animals were sold on the market in preference to older ones, because they would bring more money. Later the older animals were forced on the market because they were no longer fit for breeding purposes.

This deflation in prices and depletion of good breeding herds has to some extent reacted, causing the price of market animals during the past year to advance, as will be shown by comparison of prices quoted from "Livestock Markets."

	October 23, 1922	*October 24, 1921*	*Per cent Advance*
Top steers	$13.55	$ 8.60	41.1
Top yearlings	12.00	11.25	15.5
Feeder cattle	8.00	6.75	18.5
Top hogs	9.75	8.30	17.4
Top lambs	14.60	8.75	66.8
Feeder lambs	14.75	7.75	90.3

HOGS

A year ago we found that very little coöperative marketing of hogs had been done for the past two years. In fact only Iredell County had shipped any hogs in this manner during that time.

The office of swine extension was getting some excellent feeding demonstrations going in a few counties over the State, and since these demonstrations could be made the basis of making up coöperative carload shipments, we gave assistance whenever possible in encouraging this work and handling these coöperative shipments.

This work has grown during the year so that 14 counties produced and sold coöperatively 34 cars of hogs fed under the direction of the office of swine extension and sold through this office. Most of this work has been done in the eastern part of the State in cotton growing sections, and no doubt the invasion of the boll weevil has had considerable to do in preparing the minds of the farmers in this section for this hog work.

SELLING FAT HOGS COOPERATIVELY

Feeding right and selling right have followed extension work with swine in North Carolina.

Most southern farmers who produce surplus hogs for the market sell these hogs during the months of November, December, and January. Our plans have been to get North Carolina farmers interested in selling their surplus hogs on the high markets.

Most of the shipments made in the spring of 1922 were sold during the month of March. Summer shipments were made during the months of June, July, and August, most of them going to Richmond, Va., where they brought 10½ to 11¾ cents per pound. In many instances the

carload shipments were sold for 9½ to 11 cents per pound f. o. b. shipping point.

In marketing hogs of these sales it has been our purpose to develop as much as possible the local markets within the State. In this we have been rather successful, in that we have sold a number of cars of these hogs to Hooker & Company, Kinston, and the Charlotte Packing Company, Charlotte.

The hogs fed and marketed under the instructions furnished through the Agricultural Extension Service have been of such good quality and finish that we have been able to receive top prices for these hogs. We hope to develop this work to the extent that we will be able to get a very large part of the surplus hogs of the State of such quality and finish that they will sell as well as corn-belt-fed hogs, and if the farmers can be taught to get their hogs on the market at the right time, there is no reason why the hog industry in North Carolina should not grow and be developed as a very profitable basis. Charts which have been prepared by this office show that over a twenty-year period the lowest prices are in November, December, and January, when the bulk of the surplus hogs in North Carolina are sold.

LAMBS

In view of the fact that lambs sold for a much better price than was anticipated, farmers were encouraged to sell their early lambs on local markets, where they were receiving 15 to 20 cents per pound gross weight, rather than wait until later when the coöperative shipments would be ready with a chance of taking less money. These prices were very satisfactory to the producers, and it enabled them to sell their lambs when of the right weight rather than selling them when the smaller ones were ready.

It is interesting to know that spring lambs sold on the Chicago market at a price (26 cents per pound) higher than at any time during the war, the highest price being at this time 25 cents per pound gross. This price for mutton, together with the splendid price received for wool during the year, is causing a greater development of the sheep industry in the State.

WOOL

Wool could hardly be sold for any price in 1921. During the winter prices began to advance. As usual, the local wool buyers received the information before the farmers had it, and contracted for a large part of the wool before the farmers were aware of the advance in price. To assist the farmers in getting better prices than offered by these local wool buyers, arrangements were made for a number of wool pools in this State, making the county the unit. Three hundred and one farmers consigned 43,789 pounds of wool and received an average price of $0.309 per pound.

We were assisted in grading the wool by a representative of the Bureau of Agricultural Economics, Washington, D. C. A considerable number

of buyers were interested in these sales, but a large part of the wool was bought by the Chatham Manufacturing Company, Winston-Salem, N. C.

Very few counties in western North Carolina were active in this plan. The wool pool held in Jackson County, also the ones held in Avery and Watauga counties, were independent of the ones just mentioned, and approximately 20,000 pounds of wool was sold for 36 cents per pound, which was five to eight cents per pound more than the farmers were offered at the time of the sale.

Our plans are to continue the wool marketing project for 1923 in the same manner as this year, and the indications are that we will have no trouble in getting a much larger amount of wool consigned.

CATTLE

There has been little interest in feeding cattle in this State during the past two years as a result of the high prices of feed. It seems that the winter of 1922 would be a better time for feeding cattle, due to the fact that the price of feed and the price of cattle are more in line, but the farmers have manifested very little interest in feeding cattle this season.

Arrangements were made for holding a coöperative cattle sale at Spruce Pine to include the counties of Yancey, Mitchell, and Avery. Nearly 300 head of cattle were consigned and sold at auction to the highest bidder at very satisfactory prices. This is the second coöperative sale held at this point. The first one was held in September, 1920.

Unfortunately the better class of cattle in these three counties was contracted for before it was decided to hold a coöperative sale this season. Our plans are to continue the coöperative sale project another year, as the farmers were very much pleased with the results received.

We have made a number of shipments of cattle to Richmond and Baltimore markets this past season.

CHEESE

North Carolina is producing annually around 400,000 pounds of cheese. This cheese is produced in western North Carolina in a section where the roads are in bad condition, thereby making market facilities very poor. Practically all the output of these cheese factories in the State since they were established has gone to Swift & Company and Armour & Company, the prices being based on the lowest Plymouth, Wis., prices.

The producers furnishing the milk for these cheese factories have felt for some time that they were not receiving enough for it. An effort has been made by this division to help create a market in North Carolina and adjoining states for North Carolina cheese. Through reliable brokerage firms considerable of this output has been distributed direct to wholesale grocers who are glad to buy North Carolina cheese. In this way the price per pound received for the output of cheese in North Carolina has been increased.

The great trouble with this particular industry at present has been that no storage facilities have been provided, and during the time when most of the output is being made, during the summer months, it is forced on the market at a time when cheese is lowest in price for the year.

EGGS

In the spring of 1922 an effort was made to assist in marketing eggs. It was soon found that the supply was much less than the demand for good eggs, and that it was impossible to satisfactorily market poor eggs in this State.

What is badly needed in regard to this industry is that the amount furnished the market be properly candled and graded before being put on the market. There is a splendid market for more eggs than are produced in this State when this is done.

FARM FENCING CAMPAIGN

In view of the fact that eastern North Carolina is to change its methods of farming, using considerable areas of land now devoted to cotton in producing foods and feed crops (and necessarily more livestock), it is very essential that this section of the State build more pastures and do more fencing.

Arrangements are being made with the various hardware dealers in those counties who sell products of the American Steel and Wire Company, New York, to sell farm fencing material at cost to the farmers plus 5 per cent for handling through the dealer. In this plan the farmers are to pay cash and to receive shipments from the car.

Fruits and Vegetables

ORGANIZATION

The past year has found the fruit and truck growers unusually eager to coöperate with each other. This has been especially true since the passage of the recent Coöperative Marketing Act, as it is now possible to perfect an organization that will be able to weather hardships. The former act permitted no really binding features, and most of the old associations that were able to survive have been reincorporated in order to gain the advantages of the recent act. In this transformation they were assisted by Mr. Gorrell Shumaker, who is handling the marketing of fruits and vegetables.

The greatest activity has been among the sweet potato growers. Here the Division of Markets has worked in close coöperation with the Division of Horticulture. Over a dozen local sweet potato growers associations with their subsidiary storage coöperations have been formed. Several of these have then been welded into a State federation, which has for sale this year around 70,000 bushels of potatoes. About a dozen

complicated legal forms, including by-laws, contracts, and various forms of agreement, have been prepared as a standard for use by these organizations. In the preparation of these we have had the assistance of Aaron Sapiro.

Considerable attention has been devoted to local marketing problems. An attempt was made to assist the farm agent and home agent in starting a city market at Charlotte, but the venture has not yet materialized because of so little local support. The coöperative marketing stall in the Durham market and the curb markets at Greensboro, Fayetteville, and Lumberton have been successful. A circular, entitled "Market Requirements for Fruits and Vegetables," was prepared for use on these local markets. The latest development is the coöperative stall in the Raleigh market. Several days were spent in assisting with the planning of this venture and the neat arrangement of its products, together with aid in standardizing grades for the various commodities. A study is now being made of the situation at Oxford with a view of making recommendations for the improvement of local marketing conditions there.

MARKET NEWS SERVICE

The coöperative arrangement between this division and the Federal Bureau of Agricultural Economics for handling market news service has been continued. Under this plan the Division of Markets usually bears most of the local expense and the Washington office provides for collecting the information on the consuming markets. During the shipping seasons strawberry reports were mailed from Chadbourn, potato reports from Chadbourn, and peach reports from Aberdeen. Melson should by all means be added to this list if sufficient funds are available.

STANDARDIZATION OF GRADES

Growers everywhere are endorsing the standardization program. More calls for grading demonstrations are received than can be cared for with the limited force at hand. The strawberry and sweet potato grades remain unchanged, and only slight changes have been made in the official grades for potatoes and apples. Beginning with the coming season there will be official grades for cucumbers and peaches, as the other two years of experimental work with these grades among our growers have met with so much favor among both the trade and producers. Grades will be recommended for other commodities as fast as time can be spared from the present projects for the investigational work necessary.

Agricultural Statistics—Crop Reporting Service

This work is showing the most complete results of any period in its existence. It embraces, in addition to the original crop estimates program, statistical work in research, an annual farm census of considerable possibilities, a well developed tobacco sales reporting system, and it now

proposes to function in a more effective way by extending agricultural economics data and interpretations to the State College of Agriculture and to the Extension Service workers. More effective publication of its findings and efficiency in methods of determining its results have been gained. The results are being accepted as authentic and the farmers and the public generally are supporting the work and using the information to advantage.

Mr. Frank Parker, agricultural statistician, reports that incomplete records for the year indicate that 4,692 letters and 28,967 reports were received through the mails. At the same time they mailed out 4,295 letters and 114,082 reports and schedules in addition to thousands of circular letters and pieces of printed matter.

PUBLICATIONS

By resuming the publication of the *Farm Forecaster* as a medium of disseminating statistical information and reports, it has been possible to meet the many calls for facts which could not have been supplied through individual letters as was necessary last year. State College and agricultural high school students are increasing their use of these publications to a surprising degree. In many instances county school superintendents have had their teachers make use of the crop reports.

FARM CENSUS

Considerable recognition is due to the farm census, which was begun as a voluntary survey, by counties, and which is now an established part of the tax listers' work. By intensive effort this year the work will be completed months ahead of the usual time, despite the increased scope of the work. Besides the usual crops, there have been included: tenant and idle-land studies, fertilizer, fruit, pasture, legumes, truck, bees, and other economic facts. Reports have been secured on 165,000 farm tracts, each report covering 34 basic items of information. The results should be of great value to extension workers and agricultural interests generally.

Credit Unions

Like all other organizations or institutions dealing with finance, the credit unions of North Carolina are emerging from a period of financial stringency unequaled in history. In spite of this they are generally reported in satisfactory condition.

R. O. Moen, who succeeded Fred R. Yoder as specialist in credit unions, reports that at present there are twenty-nine credit unions incorporated in the State. They are located in fifteen counties in various parts of the State, and are proving to meet the needs of the different types of farmers.

Most of the colored credit unions are operated in the cotton and tobacco growing sections, where they take the form of coöperative pur-

chasing societies. In following out the law, their loans are made for productive purchases only. Any member wishing a loan fills out an application blank furnished by the secretary-treasurer, stating the amount of the loan and the length of time desired, the purpose for which the loan is to be used, and the kind of security offered. The purpose for which loans are made include the following: to help build barns and houses and fertilizers, livestock and farm machinery, seeds, food and feed supplies, and to pay off old debts incurred for productive purposes. The common interest rate charged is six per cent.

The credit unions organized among the white farmers take the form of coöperative banks. Deposits are always encouraged. They are added to the cash received from the sale of stocks to form a cash fund from which loans are made. Here, too, the secured loans are made for productive purposes to persons who can and will repay the loans at maturity. Banking accommodations are thus given to persons with surplus funds and savings as well as to the persons wishing short-time loans who have not access to regular banking channels.

During the early part of the year the work of this office was directed toward expansion—five credit unions having been formed. Some attention was given to the improving of the accounting of the credit unions when the regular audits were made.

Since September first the work has been directed toward placing the weaker credit unions on a firmer financial and business basis. This is being accomplished by conducting analytical audits of the books and by directly helping the secretary-treasurers of the credit union.

Respectfully submitted,

B. F. Brown,

Chief, Division of Markets and Rural Organization,
State Superintendent of Warehouses.

REPORT OF SPECIALIST IN MARKETING

Foreword

During the past few years we have seen the livestock industry pass through many trials. During the war there was a great cry for more livestock and bigger crops, and the farmers produced as never before. After the war there came a period of deflation, and producers were found with considerable production on hand and the markets gone to pieces.

The obligations the farmers had to meet caused great quantities of the products to be rushed on the market and many herds had to be sacrificed. In many cases the younger animals were sold on the market in preference to older ones because they would bring more money. Later the older animals were forced on the market because they were no longer fit for breeding purposes.

This deflation in prices and depletion of good breeding herds has to some extent reacted, causing the price of market animals during the past year to advance, as will be shown from comparison of prices quoted from "Livestock Markets":

	October 23, 1922	*October 24, 1921*	*Per cent Advance*
Top steers	$13.55	$ 8.60	41.1
Top yearlings	12.00	11.25	15.5
Feeder cattle	8.00	6.75	18.5
Top hogs	9.75	8.30	17.4
Top lambs	14.60	8.75	66.8
Feeder lambs	14.75	7.75	90.3

The policy this year in livestock marketing work has not been so much to increase the herds, but in encouraging the successful marketing of the animals of the farmers at the present time.

This division has had the hearty coöperation of the other members of the Agricultural Extension Service, and especially the county agents, and the offices of swine and sheep extension of the Animal Industry Division.

HOGS

A year ago we found that very little coöperative marketing of hogs had been done for the past two years. In fact, only Iredell County had shipped any hogs in this manner during that time.

The office of swine extension was getting some excellent feeding demonstrations going in a few counties over the State, and since these demonstrations could be made the basis of making up coöperative carload shipments, we gave assistance whenever possible in encouraging this work and handling these coöperative shipments.

This work has grown during the year so that fourteen counties produced and sold coöperatively 34 cars of hogs fed under the direction of

the office of swine extension and sold through this office. There were other counties interested in this work, but not to the extent of making a car, in which cases the hogs were sold locally.

The accompanying map will show the counties interested in this cooperative feeding and marketing work. It will be noted that most of this work has been done in the eastern counties of the State in cotton growing sections, and no doubt the invasion of the boll weevil has had considerable to do in preparing the minds of the farmers in this section for this hog work.

Most southern farmers who produce surplus hogs for the market sell these hogs during the months of November, December, and January. If a close study of the marketing conditions given, showing the average prices of hogs by months on the Chicago market for the past 20 years, it will be noted that on an average hogs have sold highest in the early spring and late summer. Our plans have been to get North Carolina farmers interested in selling their surplus hogs on these high markets.

Most of the shipments, made in the spring of 1922, were sold during the month of March. Summer shipments were made during the months of June, July, and August, most of them going to Richmond, Va., where they brought 10½ to 11¾ cents per pound. In many instances the carload shipments were sold for 9½ to 11 cents per pound f. o. b. shipping point.

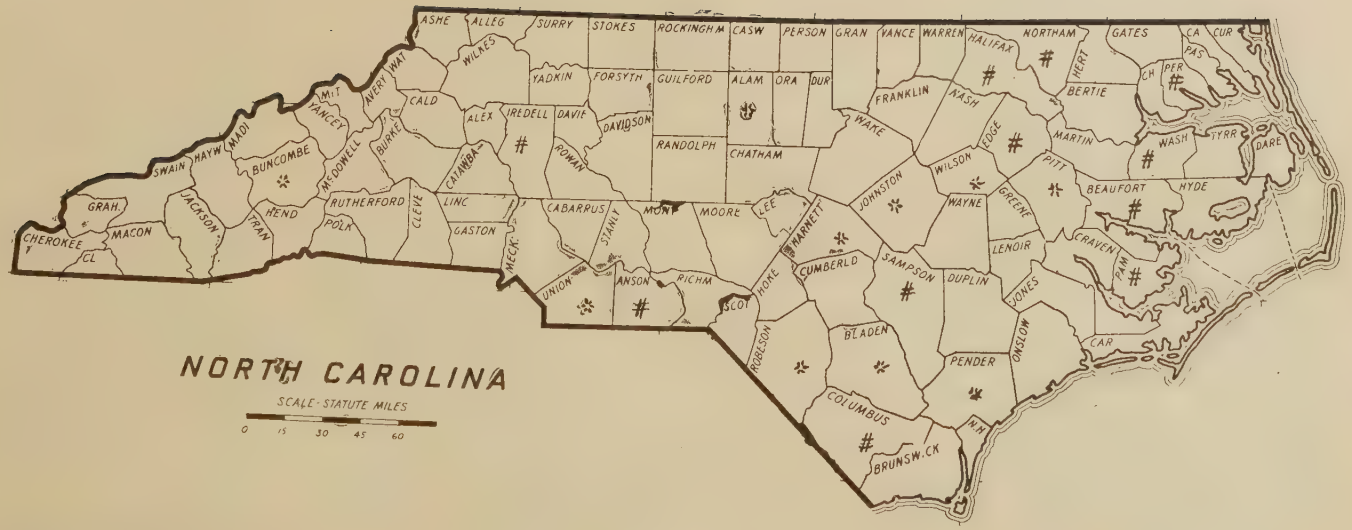
The cost of marketing hogs shipped from points in North Carolina to Richmond has been approximately 1 cent per pound, including freight, shrinkage of weight in transit, and other items. From Speed, N. C., these costs were 92 cents per hundred pounds.

In marketing the hogs of these sales it has been our purpose to develop as much as possible the local markets within the State. In this we have been rather successful in that we have sold a number of cars of these hogs to Hooker & Company, Kinston, and the Charlotte Packing Company, Charlotte.

One interesting feature that has been developed with regard to marketing hogs from this State is as follows:

Last spring when corn-belt hogs were worth 11½ cents, Carolina hogs sold for 10½ cents and Georgia hogs at 9½ cents on the same market, the discrimination in price being made the very moment the place of origin of the hogs was determined.

The hogs fed and marketed under the instructions furnished through the Agricultural Extension Service have been of such good quality and finish that we have been able to receive top prices for these hogs. We hope to develop this work to the extent that we will be able to get a very large part of the surplus hogs of the State of such good quality and finish that they will sell as well as corn-belt-fed hogs, and if the farmers can be taught to get their hogs on the market at the right time, there is no reason why the hog industry in North Carolina should not grow and be developed on a very profitable basis.



‡Counties feeding one or more hogs in 1922.
*Other counties feeding hogs.
Note that most of the hog feeding and coöperative marketing is in Eastern North Carolina. Thirty-four cars in fourteen counties (making carlot shipments).

Please note carefully the average monthly prices of hogs from July, 1921, to June, 1922, inclusive, which verifies the plan of selling hogs on the market in the early spring and late summer:

1921	*Per 100 lbs.*	*1922*	*Per 100 lbs.*
July	$11.75	January	$7.90
August	11.85	February	9.85
September	9.65	March	10.45
October	9.00	April	10.35
November	8.00	May	10.50
December	8.25	June	10.40

These figures show lowest prices in November, December, and January, when the bulk of the surplus hogs in North Carolina are ordinarily sold.

LAMBS

During the months of April and May, time was spent attending the shearing, docking, and castrating demonstrations given under the direction of the office of sheep extension. This gave an opportunity to get acquainted with a number of farmers who would have lambs to market. Plans were made for shipping several cars coöperatively.

In view of the fact that lambs sold for a much better price than was anticipated, farmers were encouraged to sell their early lambs on local markets, where they were receiving 15 to 20 cents per pound gross weight rather than wait until later, when the coöperative shipments would be ready, with a chance of taking less money. These prices were very satisfactory to the producers, and it enabled them to sell their lambs when of the right weight rather than selling them when the smaller ones were ready.

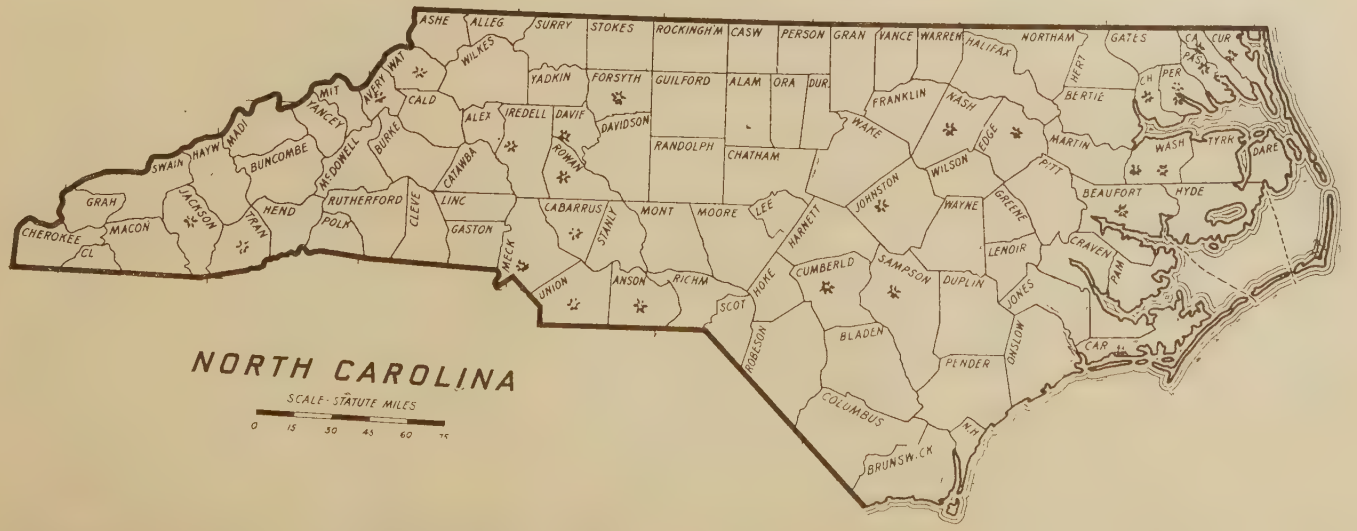
It is interesting to know that spring lambs sold on the Chicago market at a price (26 cents per pound) higher than at any time during the war, the highest price being at this time 25 cents per pound gross. Lambs have held up in price this year so that they are now at this time (November 4) 14 cents per pound in Chicago. This price for mutton, together with the splendid price received for wool during the year, is causing a greater development of the sheep industry in the State.

A greater percentage of the sheep in North Carolina are produced in the western part of the State, and with the number of county agents increasing in this section, it is possible that we may be able to take care of marketing these lambs in a more satisfactory manner.

WOOL

Wool could hardly be sold for any price in 1921. During the winter prices began to advance. As usual, the local wool buyers received the information before the farmers had it, and contracted for a large part of the wool before the farmers were aware of the advance in price.

*Counties interested in wool pools, 1922. Sales held at every point except Iredell, Davie, Cabarrus, Johnston, Cumberland and Sampson. Two pools were held in Washington County—one at Plymouth and one at Creswell. Three hundred and one farmers consigned 43,879 pounds. Sold at an average of 30.9 cents per pound.



A large per cent of the above wool was burry and sold at a discount. The pools were held largely in Eastern North Carolina counties and Piedmont counties. The pools in Jackson and Avery and Watauga counties were not included in the above pools. There were 8,097 pounds of light burry and 15,961 pounds of heavy burry wool, which sold for 5 to 15 cents under clear wool of the same grade free of burs.

To assist the farmers in getting better prices than offered by these local wool buyers, arrangements were made for a number of wool pools in this State, making the county the unit.

The accompanying map shows where these wool pools were held. A number of counties were assisted in this work, since wool was shipped from many counties to make one pool. For example, a wool pool held in Tarboro, Edgecombe County, consisted of wool from Edgecombe, Johnston, Cumberland, and Sampson counties. There were 301 farmers who consigned 43,789 pounds of wool and received an average price of $0.309 per pound.

The plans were as follows:

1. To make the pools not less than 2,000 pounds each.
2. To grade the wool, using the regular standard grades worked out by the Bureau of Agricultural Economics.
3. To sell the wool at auction to the highest bidder.

We were assisted in grading the wool by a representative of the Bureau of Agricultural Economics, Washington, D. C. A considerable number of buyers were interested in these sales, but a large part of the wool was bought by the Chatham Manufacturing Company, Winston-Salem, N. C.

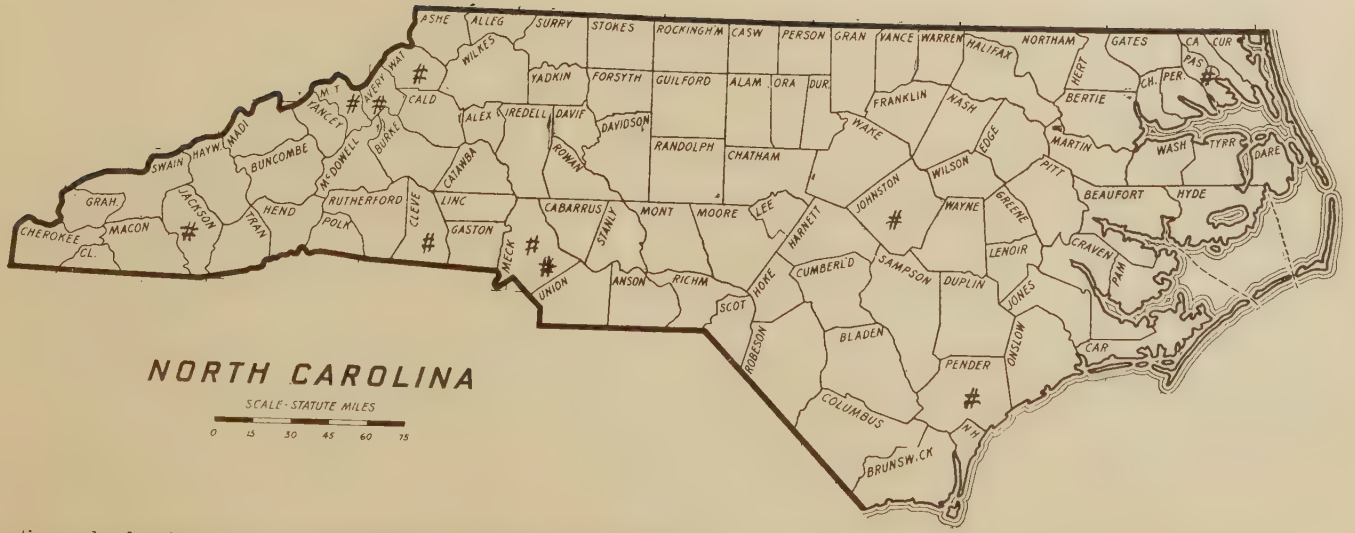
It will be noted from the map showing the location of these wool pools that very few counties in western North Carolina were active in this plan. The wool pool held in Jackson County, also the ones held in Avery and Watauga counties, were independent of the ones just mentioned, and approximately 20,000 pounds of wool was sold for 36 cents per pound, which was five to eight cents per pound more than the farmers were offered at the time of the sale.

Our plans are to continue the wool marketing project for 1923 in the same manner as this year, and the indications are that we will have no trouble in getting a much larger amount of wool consigned.

As an educational feature our plans are to have the wool assembled at the county-seat or some convenient point and grade it the same day, making use of the help of the farmers in handling the wool, thereby teaching them the importance of grading so that they will appreciate the distinction made in prices for the various grades shown on an itemized statement which will accompany their checks for the wool consigned.

We hope to enlist a large number of counties in western North Carolina in these wool pools. We feel that a greater number of these pools were in eastern North Carolina this year as a result of the educational work already done on coöperative marketing.

There are a few counties in western North Carolina ready for the plan of marketing wool by contract, but the majority of these good wool-producing counties have had little educational work done, and it seems advisable that the 1923 clip should be sold by voluntary marketing rather than marketing by contract.



‡Counties rendered assistance in lamb marketing. Only one coöperative shipment (Pasquotank County) was made; the others were sold to local butchers.

CATTLE

There has been little interest in feeding cattle in this State during the past two years as a result of the high prices of feed. It seems that the winter of 1922 would be a better time for feeding cattle, due to the fact that the price of feed and the price of cattle are more in line, but the farmers have manifested very little interest in feeding cattle this season.

The demands for good cattle have been very brisk this fall, and for this reason buyers went into the cattle-producing sections very early in the season and contracted for the best cattle. In view of this, competition in buying has been much stronger than usual this season. Cattle advanced in price and farmers readily sold their best cattle. As usual, there was a considerable number of plain cattle left unsold.

Arrangements were made for holding a coöperative cattle sale at Spruce Pine, to include the counties of Yancey, Mitchell, and Avery. Nearly 300 head of cattle were consigned and sold at auction to the highest bidder at very satisfactory prices. This is the second coöperative cattle sale held at this point. The first one was held in September, 1920, just when cattle were beginning to decline in price, and the results were not so satisfactory at that time, due to the fact that the farmers felt that they were not getting what their cattle were worth. Later they saw that it would have been better for them to have sold their cattle through the sale rather than privately at a later date.

Unfortunately the better class of cattle in these three counties were contracted for before it was decided to hold a coöperative sale this season. Our plans are to continue the coöperative sale project another year, as the farmers were very much pleased with the results received.

We have made a number of shipments of cattle to Richmond and Baltimore markets this past season.

CHEESE

North Carolina is producing annually around 400,000 pounds of cheese. It is estimated that nearly this amount will be made for the year 1922. This cheese is produced in western North Carolina in a section where the roads are in bad condition, thereby making marketing facilities very poor.

Practically all the output of these cheese factories in the State since they were established has gone to Swift & Company and Armour & Company, the prices being based on the lowest Plymouth, Wis., prices.

The producers furnishing the milk for these cheese factories have felt for some time that they were not receiving enough for it. An effort has been made by this division to help create a market in North Carolina and adjoining states for North Carolina cheese. Through reliable brokerage firms, like T. S. Southgate & Company, Norfolk, Va., considerable of this output has been distributed direct to wholesale grocers who are glad to buy North Carolina cheese. In this way the price per

pound received for the output of cheese in western North Carolina has been increased.

The great trouble with this particular industry at present has been that no storage facilities have been provided, and during the time when most of the output is being made, during the summer months, it is forced on the market at a time when cheese is lowest in price for the year.

EGGS

In the spring of 1922 an effort was made to assist in marketing eggs. It was soon found that the supply was much less than the demand for good eggs, and that it was impossible to satisfactorily market poor eggs in this State.

What is badly needed in regard to this industry is that the amount furnished the market be properly candled and graded before being put on the market. There is a splendid market for more eggs than are produced in this State when this is done.

FARM FENCING CAMPAIGN

In view of the fact that eastern North Carolina is to change its methods of farming, using considerable areas of land now devoted to cotton in producing foods and feed crops (and necessarily more livestock), it is very essential that this section of the State build more pastures and do more fencing.

It was decided at a meeting of the district agents held in August that such a campaign be inaugurated in this State during the fall and winter months. Assistance was rendered by this office in working out the details of the plan of operation of the campaign, giving the benefit of experience gained in a similar campaign in South Carolina. Indications are that practically every county east of Raleigh having a county agent will put on an active campaign for more farm fencing.

Arrangements are being made with the various hardware dealers in those counties who sell products of the American Steel and Wire Company, New York, to sell farm-fencing material at cost to the farmers plus 5 per cent for handling through the dealer.

In this plan the farmers are to pay cash and to receive shipments from the car.

Arrangements have been made with the above company to furnish any county agent actively engaged in this campaign a ten-rod stretch of woven wire fencing with posts for demonstration fence.

We feel that this campaign will lend much to the livestock situation in eastern North Carolina in view of the fact that this section has been "open range" territory, growing largely cotton, peanuts, soybeans, and practically no livestock except hogs, which have been allowed to "run free" after the crops have been harvested.

General

We are revising our mailing list, and have classified the livestock producers in 35 counties under four heads: namely, hogs, cattle, milk cattle, and sheep producers. In this way we will be able to render service to each of these groups when necessary without writing farmers who are not interested in the special subject under discussion. For example, in working up wool pools another year we will have the list of sheep producers of the State to which information will be sent instead of sending it to nonproducers of sheep.

We have this list complete for only 35 counties, but our plans are to finish this list for the State. In most instances the farmers making up this list were taken from the tax books, and in this way the list will be reliable for a considerable number of years.

Considering the number of projects deserving attention in livestock work by this division, it is impossible for one man to develop and take care of the needs of the work.

Respectfully submitted,

V. W. LEWIS,

Livestock Marketing Specialist.

REPORT OF DIVISION OF PLANT PATHOLOGY

To the Director:

The following brief statement concerns the extension work in plant pathology for the fiscal year ending June 30, 1922.

Since Mr. A. C. Foster, extension specialist, severed his connection with the work on December 31, 1921, and no one was secured to take his place, this report covers the period from July 1 to December 31, 1921.

Cotton Anthracnose

The work on cotton anthracnose, which has for its object the elimination of seed-borne infections from high-grade cotton varieties, has been continued along the same lines as in previous years. The work was conducted in coöperation with cotton breeders and growers in order to insure a supply of seed for other growers. The dry season of 1921 was unfavorable to the development of anthracnose, and thus aided in securing a supply of seed free from disease.

The portion of this work with cotton breeders has been conducted in coöperation with the Division of Agronomy. At the close of the season a list of all coöperators was prepared and furnished to county agents for their information as to the source of available anthracnose-free seed for planting in 1922. The demonstrations were conducted in the following counties: Robeson, Hertford, Columbus, Pasquotank, Union, Edgecombe, Lenoir, Pitt, Johnston, Anson, Sampson, Cabarrus, Mecklenburg, Montgomery, and Wayne.

Cotton Wilt

Further demonstrations with Dixie Triumph cotton, a wilt-resistant variety, which is at the same time adapted to growth under boll weevil conditions, were conducted. These tests were satisfactory, since this variety maintained a high degree of resistance and was at the same time early in setting a crop of bolls. This work was located in Anson, Edgecombe, Pitt, Robeson, Sampson, and Wayne counties.

Irish Potato Diseases

The advantages of the control of Irish potato diseases in North Carolina have been set forth in our report of the previous year. The work seems now to have progressed to the point where its feasibility is proven, and, in consequence, a potato growers' association has been organized in Avery County. Further work on this problem will be necessary since the certification of mountain-grown seed requires considerable time in inspection. At least two inspections during the growing season are required. Since, however, we can deal with the problem through an organized association, the matter is simplified and the work is more effective.

General

As is always the case, a considerable number of inquiries regarding plant diseases have been handled by letters and by distributing publications dealing with the specific disease. Timely articles have been prepared for the press, special meetings have been held, growers have been visited in company with the county agent, and instructions have been given on the recognition and control of plant diseases.

Respectfully submitted,

Frederick A. Wolf,
In Charge of Extension Plant Pathology.

REPORT OF DIVISION OF PUBLICATIONS

To the Director:

The Division of Publications is a part of the Agricultural Experiment Station and Extension Service, conducted jointly by the State College of Agriculture and the State Department of Agriculture in coöperation with the United States Department of Agriculture. It is the function of this division to edit and mail the letters, forms, and other mimeograph and multigraph matter from the various divisions of the Experiment Station and Extension Service, to edit and distribute the extension publications, the experiment station publications, and the publications of the State Department of Agriculture; to supply news items about farming to the press of the State, and to circulate the information found out by the workers in the various divisions to the people of this State.

In addition to this, other service work is done in that the division has charge of the various cuts used in the different publications, the photographs used for illustrative purposes, and the supplies of stationery which are used, particularly by the extension workers in the field. In this office also are maintained the various mailing lists and the multigraph and mimeograph equipment used in the work of the institutions represented.

Multigraph and Mimeograph Work

To give some idea of the services performed for the various divisions during the past year, we have printed for the Farm Demonstration Division 171,792 letters and forms, of which we have mailed out 159,856; for the Home Demonstration Division we have printed 79,374 letters and forms, and mailed out 41,704; for the Animal Industry Division we have printed 103,406 letters and forms and mailed 33,520; for the Director of the Experiment Station and Extension Service we have printed 25,072 letters and forms and mailed 14,842; for the Division of Markets we have printed 93,744 letters and forms and mailed out 64,636; for the Division of Farm Drainage we have printed 21,525 letters and forms and mailed out 16,560; for the Division of Horticulture we have printed 3,300 letters and forms and mailed out 3,250; for the Food and Oil Chemist we have printed 33,360 copies of mimeograph matter; for the coöperative marketing work we have printed 6,200 letters and forms; for the Division of Agronomy we have printed 3,450 letters and forms; for the Veterinary Division we have printed 3,085 letters and forms. The printing and mailing of this large amount of mimeograph and multigraph matter has only been made possible by the use of up-to-date equipment, so that we could satisfy the demands for service made on us by the various divisions.

At the same time, however, we have saved considerable money for the various divisions by buying blank paper in quantity and multigraphing

the letterhead of the division on this paper. For instance, during the past year we have made 157,000 letterheads for the Farm Demonstration Division, about 84,000 for the Home Demonstration Division, and a little over 18,000 letterheads for the Animal Industry Division. This does not include work done during the latter part of the year 1922, during which time we printed a large additional supply of these letterheads for these same divisions.

Newspaper Articles

During the year about 51 articles have been sent to the daily and weekly papers of the State. This does not include a number of feature articles and articles sent to agricultural papers, nor does it also include a great number of press articles sent out during the latter part of the year, at which time the present editor was taking active charge of the editorial work and supplying some two or three articles to the dailies each week, as well as several short articles to the weekly papers each week. Our total, however, shows that 9,265 copies were made of these articles and supplied to the press of North Carolina.

The Division of Publications also handles all requests for literature coming from farmers in North Carolina, and from agricultural workers all over the United States. The time of one person is largely occupied in answering these requests. During the past year our records show that we have mailed out approximately 62,000 publications for the State Department of Agriculture. For the Agricultural Extension Service we have mailed out on request and distributed, through county agents and specialists approximately 100,000 copies of the extension circulars and folders, and for the Agricultural Experiment Station about 11,000 bulletins have been handled in this same way.

Bulletins and Circulars Printed

During the fiscal year from July 1, 1921, to June 30, 1922, a total of 18 extension circulars, with a total issue of 173,500 copies, have been edited and printed by this division. These are as follows:

Extension Circular 113—Jelly, Preserves, Jams, and Pickles	25,000
Extension Circular 114—Canning Fruits and Vegetables	25,000
Extension Circular 115—Coöperative Marketing of Farm Products	5,000
Extension Circular 116—(Printed by the Department of Vocational Education)	
Extension Circular 117—Equipment for Making Sorghum Syrup	2,500
Extension Circular 118—Farm Fencing	5,000
Extension Circular 119—Preparation of Pork on the Farm	15,000
Extension Circular 120—Long and Short Staple Cottons Compared	3,000
Extension Circular 121—The Home Garden	7,500
Extension Circular 122—The Farm and Home Garden Manual	15,000
Extension Circular 123—The Farm Garden	7,500
Extension Circular 124—Farming Under Boll Weevil Conditions	20,000
Extension Circular 125—The Optimum Diet	5,000
Extension Circular 126—The Culling and Feeding of Poultry	5,000

Extension Circular 127—Soybean Growing in North Carolina	4,000
Extension Circular 128—Handling the Products of the Family Cow	10,000
Extension Circular 129—Control Methods for Insects	4,000
Extension Circular 130—Natural and Artificial Incubation	5,000
Extension Circular 131—Judging Livestock	10,000

Of these circulars approximately 100,000 were distributed in answer to individual requests and through the county agents and specialists of the extension service. Circular 116, "A Score Card for Lard Type Hogs," by W. W. Shay, is a reprint of circular 97, and was paid for and distributed by the Department of Vocational Education.

In addition to these circulars, 42,000 extension folders were also printed during the year. Folders number 4 and 5 were printed and number 3 reprinted. These are as follows:

Extension Folder 3—(Reprinted) Milk for the Whole Family	20,000
Extension Folder 4—Available Publications	2,000
Extension Folder 5—Cow Facts	20,000

Practically the entire issues of folders 3 and 5 were used in milk campaigns held at Charlotte, Raleigh, Greensboro, High Point, and Winston-Salem, where this division rendered material assistance in giving publicity to the campaigns.

During the past year 12 issues of *Extension Farm News,* of 2,250 copies each, were made. This made a total issue of 27,000 copies, all of which were distributed among the newspapers, teachers, county agents, and others interested in the agricultural development of North Carolina.

Four issues of *Tar Heel Club News,* three being for 8,500 copies each, and one for 9,000 copies, making a total of 34,500, were issued by the division and distributed to club members during the same period.

Three popular bulletins and two technical bulletins were prepared and issued for the Agricultural Experiment Station. A total of 17,000 copies were printed and about 11,000 distributed through the regular channels.

Seven monthly bulletins of the State Department of Agriculture, with a total issue of 36,000 copies, have been edited, published, and distributed during the past year.

Handling Paper

One phase of our work which deserves special mention is the handling of paper for the various divisions. Heretofore each division has bought its own paper in small lots, paying high prices on account of the limited purchases. Mr. A. O. Alford and my predecessor, Mr. R. W. Green, worked out a plan whereby this division buys paper in bulk and issues it at cost to the separate divisions as needed. A strict account is kept as to this stock, and whenever it gets low, replacement orders are issued from the divisions according to what has been used. In some cases the Division of Publications has affected a saving amounting to as much as $1.50 per thousand sheets.

In conclusion, permit me to state that the Division of Publications has received the hearty coöperation of practically all the workers in the organization. The demands made on us have been met as fully as possible under the circumstances, and we have tried to render prompt and efficient service in all cases. In closing I would like to commend the efficient work of those connected with me in this division, especially during the time from the resignation of Mr. Green and my active participation in the work. All of the routine activity was carried on in a highly satisfactory and efficient manner.

Respectfully submitted,

F. H. JETER,
Agricultural Editor.

REPORT ON FARM DRAINAGE

To the Director:

I hereby submit the annual report on drainage conducted under a coöperative agreement between the North Carolina Department of Agriculture and the United States Department of Agriculture. This report covers the crop year November 30, 1921, to November 30, 1922.

Since May, the division has had the services of J. A. Brophy, assistant drainage engineer, furnished by the U. S. Department as temporary assistant during June, July, August, and September, and taken over by the State Department on October 1.

The work has been conducted chiefly along the same lines as in previous years. In general, the extension part of our program consists (1) in assisting farmers in the improvement, by drainage and terracing, of lands now under cultivation, and (2) in making preliminary and reconnaissance examinations for drainage districts desiring to make drainage improvements.

Upon request, either from the county agent or the farmer, the drainage engineer makes preliminary examinations, surveys, designs, estimates, specifications, and reports for tile drainage projects on the farm. A blue-print is sent to the farmer, showing the complete system of drains. When the farmer is ready to install the tile, certain drains are staked out in the field and instructions given in the proper methods of construction.

Terraces are laid off in entire fields, and instructions given in the use of the farm level and in terrace construction. The elementary principles of the use of the farm level in terrace location are taught at boys' club encampments. County agents in the counties needing terraces are instructed in the methods of terrace location and construction, and the levels used in this work are tested and adjusted by the engineers of this office.

The engineer also makes preliminary examinations of drainage districts. The proposed district is visited, and from all available data a report is prepared, accompanied by a map, copies of which are furnished to interested parties. The method of organizing a district under the State Drainage Law is outlined.

The following summary gives a fairly accurate idea of the amount of work done along these lines:

Farm Drainage

During the past twelve months, 44 farms situated in 22 counties have been visited for the purpose of giving assistance and advice in tile drainage. The area of these tracts covered by surveys and for which plans and reports for tile drainage were proposed covered a total of 1,016

acres on 16 farms. This does not include areas examined of which no survey was made or map prepared. Stakes and grades for tile drainage construction have been given on 13 farms in 9 counties for the installation of 88,265 feet of tile, approximately 17 miles. Twenty-two thousand feet of open ditch was staked out and grades and cuts given for construction.

Sixty-one farms in 17 counties have been visited for the purpose of giving assistance in the location and construction of terraces to prevent hillside erosion, the total length of terraces laid out being approximately 147,075 feet, or 28 miles.

Drainage Districts

Only one preliminary examination and report on a drainage district was made during the past year. This covered an area of 13,000 acres. The falling off in this branch of work was due partly to the large number of competent engineers in private practice that have located in the State and are carrying on this line of work efficiently, and to the smaller demand for land due to the readjustment of land values that has taken place during the past year. The engineers of the division, however, were consulted by two districts for advice of a professional nature, and addressed several meetings of landowners on the State Drainage Law and methods of organization.

Miscellaneous

The results of experimental work and other general information have been published from time to time in the *Extension Farm News* and other papers, and publicity given in other ways. The annual convention of the North Carolina Drainage Association, held at Goldsboro, N. C., was attended and tile drainage and drainage district problems discussed. Attention was called by articles and discussion at the convention to the special benefits derived from tile drainage under boll weevil conditions. Assistance was given in a campaign held in Stanly County in farmstead improvement and landscape design on seven farms and four schools.

The past year has been notable for the interest taken and the amount of work accomplished in tile drainage, and stands as the high year's record of the division. Terrace location was considerably lower than last year, when special effort was made to extend this form of improvement, but compares favorably with other years, being above that of November, 1919-1920, the previous high record.

Respectfully submitted,

F. O. Bartel,
Drainage Engineer.

REPORT ON FARM ENGINEERING

To the Director:

The work in farm engineering has been divided into three main projects: (1) water supply, sewerage disposal, and lights; (2) farm buildings and concrete construction; (3) farm machinery and motors.

Visits were made to various sections of the State where a number of people were interested in these projects. The locations were gone over and best plans suggested. Along with this, bills of materials and estimates of cost were given. In many cases, after everything was ready, a practical working demonstration was put on. At these demonstrations all the interested parties are invited and are usually present. Besides being able to show and impress them with what we are trying to put across, these demonstrations have proven a very valuable asset in getting other work started when we could refer the men to these places.

Pumping Outfit, delivering 1000 gallons per hour, Swannanoa, N. C.

Sixty-six of these practical demonstrations were put on, including 24 self-feeders for hogs; 4 colony hog houses; 4 breeding crates for hogs; 4 poultry houses; 2 brooder houses; 4 dairy barns; 3 mule barns; 3 34′x 60′ two-story implement sheds; 8 water towers; 1 lime bin; 4 hydraulic rams; 4 pumping outfits with gas engine; 1 pumping outfit

with electric motor. These were all placed in as centrally located places as possible. A number of the self-feeders were placed on the courthouse squares so that the interested parties might see them.

Six hundred and nine blue-prints of plans for various farm buildings have been sent out, together with bills of material for each one. The plans have included everything from residences down in the way of building on the farm. These plans have gone to 66 different counties over the State, not including a good number that have been sent out of the State. Twenty-seven additional designs from which blue-prints are made for distribution have been gotten up during the year.

Visits have been made to 29 county agents; 53 men interested in home water supplies; 87 in farm buildings; 23 in machinery; 9 in water power; 4 in silos, and 2 in dipping vats.

Breeding crate for hogs, Perquimans County.

Seven meetings with total attendance of 627 were held where various forms of work were discussed. Each of our practical demonstrations usually resolved itself into a meeting for practical suggestions regarding other locations or buildings.

Three hundred and eleven conferences were held in the interest of the work; 4 district and 2 State meetings of county agents were attended, and assistance given with 1 club encampment, where instructions were given in terracing and building. Bills of materials for 13 different sizes of stave silos and 19 different sizes of concrete silos were gotten up.

Eight hundred and seventy-five letters were written; 8,807 miles traveled by railroad, and 1,903 by automobile, in carrying on the work.

A test was put on in coöperation with county agent Falls to get a comparison between several different makes of soybean harvesters, and arrangements made for continuing this next year.

A survey was made of 200 farms to get an estimate of the damage done by rats and by weevils in stored corn. The average amount of damage for each was 5 per cent, estimates in both cases going as high as 25 per cent.

A survey was made of all the windmill owners in the State, as near as possible, to see just what success they were having. The impression from these reports is that the failures have been due to the wheels not being high enough or the tank was too small, and not a general condemnation of windmills.

Respectfully submitted,

E. R. RANEY,

FINANCIAL REPORT

The North Carolina Agricultural Extension Service in account with the United States Appropriations under Smith-Lever Act, 1921-1922.

	Smith-Lever Funds	
	Federal	State
DR.		
To receipts from the Treasurer of the United States and from State sources as per appropriations for fiscal year ended June 30, 1922, under Act of Congress approved May 8, 1914 (Smith-Lever Act)	$ 215,280.72	$ 205,280.72
CR.		
By Salaries	$ 151,245.28	$ 172,954.90
Labor	206.35	338.27
Printing and distribution of publications	5,985.05	6,488.42
Stationery and small printing	2,952.26	1,635.34
Postage, telegraph, telephone, freight, and express	2,041.89	1,160.07
Heat, light, water, and power	20.35	94.39
Supplies	536.00	876.88
Library	25.98	160.67
Tools, machinery, and appliances	105.11	986.01
Furniture and fixtures	2,431.09	4,631.68
Scientific apparatus and specimens	12.02	444.63
Traveling expenses	49,278.55	15,479.46
Contingent expenses	440.79	30.00
Totals	$ 215,280.72	$ 205,280.72

We, the undersigned auditors of the corporation, do hereby certify that we have examined the books and accounts of the Extension Division for the fiscal year ended June 30, 1922; that we have found the same well kept and properly classified; that the receipts from the Treasurer of the United States were $215,280.72, under the Act of Congress of May 8, 1914, and the corresponding disbursement $215,280.72, leaving a balance of nothing; that there has been expended as an offset to the Federal Smith-Lever funds $205,280.72, State funds, for all of which proper vouchers are on file and have been by us examined and found correct.

And we further certify that the expenditures have been solely for the purpose set forth in the act of Congress, approved May 8, 1914, and in accordance with the terms of said act.

(Signed) T. T. BALLENGER,
J. F. DIGGS,
Auditors.

(SEAL.)

Attest: A. F. BOWEN, *Custodian.*
Examined and approved as correct.

B. W. KILGORE,
Director of Extension.
B. R. LACY,
State Treasurer.

Summary Statement of Expenditures by Projects Showing Classification of Expenditures From All Funds, Except Those From the State Department of Agriculture, Used for Extension Work

	Total	Administration	Printing and Distribution of Publications	Farm Demonstration	Home Economics	Animal Industry	Agronomy	Markets	Farm Engineering	Horticulture
Salaries	$324,200.18	$17,617.67	$	$153,348.93	$95,105.75	$15,523.30	$11,438.30	$3,853.52	$3,669.96	$2,472.21
Labor	544.62			183.25	193.10	14.40	.50			5.00
Printing and distribution of publications	12,473.47		12,473.47							
Stationery and small printing	4,587.60	1,110.22		1,469.14	1,009.65	328.37	446.19		40.85	85.93
Postage, telegraph, telephone, freight, express	3,201.96	920.38		532.11	374.65	910.82	302.41		25.00	47.86
Heat, light, water, and power	114.74					23.72	91.02			
Supplies	1,412.88	93.40		262.33	212.12	323.97	217.63		134.89	21.03
Library	186.65				43.66	56.54	44.67			37.98
Tools, machinery, and appliances	1,091.12					847.37	65.95		56.80	6.50
Furniture and fixtures	7,062.77	1,474.14		838.96	451.13	1,600.66	628.44	240.08	622.10	450.35
Scientific apparatus and specimens	456.65					175.63	144.00		125.00	72.02
Unanalyzed	72,934.55	4,932.12	5,188.55	13,150.09	6,264.76	12,780.47	59.49	846.66		2,912.00
Traveling expenses	64,758.01	1,130.69		37,971.86	7,895.89	7,937.57	2,634.32	640.29	812.16	1,615.24
Contingent expenses	470.79			440.79						
Totals	493,495.99	27,278.62	17,662.07	208,198.66	111,550.71	40,576.77	16,072.97	5,580.55	5,486.76	7,669.72

Summary Statement of Expenditures by Projects Showing Classification of Expenditures From All Funds, Except Those From the State Department of Agriculture, Used for Extension Work

	Plant Diseases	Bee-keeping	County and Community Fairs	Drainage	Entomology	Farm Forestry	Negro Boys' Clubs	Animal Diseases	Cotton Grading	Dairying	Imprest Fund
Salaries	$1,600.00	$ 960.00	$ 562.50	$ 200.00	$2,350.00	$ 687.50	$14,810.59	$	$	$	$
Labor			9.75				138.62				
Printing and distribution of publications											
Stationery and small printing		21.50	4.25				13.30				
Postage, telegraph, telephone, freight, express	20.84		25.00		1.70	25.00	15.59				
Heat, light, water, and power											
Supplies	113.50			11.35	4.06		18.60				
Library					3.80						
Tools, machinery, and appliances				12.00	102.50						
Furniture and fixtures	80.03			396.25	222.55		58.03				
Scientific apparatus and specimens											
Unanalyzed	167.50	614.91		2,700.00	3,808.00			7,400.00	8,385.00	2,900.00	825.00
Traveling expenses	430.28	671.38		13.81	759.67		2,244.85				
Contingent expenses					30.00						
Totals	2,412.15	2,267.79	601.50	3,331.41	7,282.18	712.50	17,299.58	7,400.00	8,385.00	2,900.00	825.00